Louise H. Mandell.

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# A CONCISE HANDBOOK
OF
# CLIMBERS, TWINERS AND WALL SHRUBS

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LOOKING DOWN A LIGHT PERGOLA IN THE AUTHOR'S GARDEN

# A CONCISE HANDBOOK

OF

# CLIMBERS, TWINERS AND WALL SHRUBS

BY

H. PUREFOY FITZGERALD

AUTHOR OF "A DICTIONARY OF BRITISH PLANT NAMES"

WITH THIRTY-TWO ILLUSTRATIONS

METHUEN & CO.

36 ESSEX STREET W.C.

LONDON

*First Published in 1906*

# PREFACE

In sending out this little handbook to the public I should like to say a few words, craving indulgence in many things, and also assistance.

I am fully conscious that some errors have probably crept in; for in the compilation of so many small facts, it would, indeed, be strange, if it was not so. I shall be sincerely grateful if any of my readers will let me hear from them, either in regard to errors, or in the matter of their own experiences with any of the plants.

The plants included in the following pages are somewhat heterogeneous in character; climbers, trailers, twiners, shrubs which will do well when planted against walls, trellis, etc., and shrubs that are not sufficiently hardy in most places to be planted in the open, but which will do when given some protection from cold winds and frost; many of them, as yet, are still to be seen only in some big gardens, such as those at Kew, but most of them are of great interest, and might well be grown in small gardens.

I may as well anticipate one criticism which, I feel sure, will be made, and that is, that many of the shrubs should not have been included in the book at all, but it is not everywhere that some of these will grow in the open, and I see

no reason why they should not be made to succeed when grown either near, or trained against, a wall in suitable soil. There are many such shrubs that I have seen doing capitally in positions such as I mention, and I wish to suggest to these critics that they should see for themselves before condemning the proposals without trial.

This handbook, I trust, will be of use to many in suggesting climbers, etc., wherewith to cover up unsightly buildings, old tree stumps, dead trees, palings, and other similar places, and to turn them, instead, into objects of interest and beauty ; a wealth of green foliage and beautiful flowers may be had in almost any position if a little trouble is taken.

In cases where there occur a large number of species in the same genus, I have endeavoured to mention the best of them, those that are most worth growing; the treatment of the species which have been excluded will, generally speaking, be the same as for those described.

It should be remembered that it is impossible to lay down definite instructions that will suit all situations in all parts of the country, for some things that thrive well in one place will not succeed at all in another, as much depends on soil, climate and so on, but the remarks have been made as definite as possible.

In regard to the nomenclature, I have adopted the Kew classification in all cases where it has been possible to do so, but in certain instances I have had great difficulties, especially in such plants as the Clematis and Roses ; the nurserymen's catalogues are often very faulty, and in

many cases misleading. The index at the end of the book has been compiled with all possible care. Every synonym that I can find and vouch for will be found there, so that I trust this may be a step out of the general confusion that exists at the present time. "One plant, one name," and that name to be recognised all the world over, is what is greatly needed to save many mistakes from being made.

Under each heading is given as far as has been possible, (1) the common name, if there is one, (2) the natural order to which the plant belongs, (3) the country of origin, (4) date of introduction, (5) average height of growth, (6) colour, time of flowering, etc., (7) best methods of propagation, (8) general remarks. For further descriptions, larger horticultural and botanical works must be consulted.

I have to thank Mr. Wyndham FitzHerbert for complying with my request to write a short account of Climbers in Cornwall and Devonshire, as, in some favoured spots in these counties, many rare and tender plants may be seen growing well and happily, and it is interesting to include them, although they are grown under very exceptional circumstances. Many of these have not been mentioned elsewhere, but Mr. FitzHerbert has written sufficiently about them for all practical purposes.

I have also to thank Mr. George Paul, of Cheshunt, and also Mr. A. G. Jackman, of Woking, for their kindness in revising those portions dealing with the Roses and Clematis respectively.

Most of the photographs have been expressly

taken by Mr. H. Irving, of Horley, Surrey; the remaining ones, those facing pages 8, 42, 77, 130, are by Mr. D. H. Fish, of the Botanical Gardens, Edinburgh.

H. P. F.-G.

Barracane,
Wellington College,
Berks., *February*, 1906

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# A CONCISE HANDBOOK OF TWINERS, CLIMBERS AND WALL SHRUBS

## THE PERGOLA OR COVERED WAY

The pergola is one of the most effective ways of growing climbing plants, and there are few gardens of any size where one could not be erected with great advantage, but, to obtain the best effect, much care must be taken in the planning of it. In the first place, the pergola should have a definite object in view; it should be a covered way, or shady walk, from one part of the garden to another, or a dividing line to separate the flower garden from other portions, or else to make a way from the lawn down the middle or side of the flower garden, and if there is an arbour at one end with an open vista at the other, the effect is oftentimes greatly enhanced. A pergola placed anywhere and anyhow, with no particular object, is out of place and much better away, but with a little care and forethought this home of climbers will be a great addition to the

garden, and a great source of pleasure. There are many kinds of pergolas, and it is impossible to lay down definite rules for the building thereof, as so much depends on the surroundings; in some places a large, bold series of arches is needed, in others a narrow, sheltered pathway, so that what would do for one place is entirely the wrong thing for another.

Before building the pergola, take some time to consider such points as, the space that can be given to it, the surroundings, and above all the position that it is to occupy; do nothing in a hurry. Personally, I like a whole year to go by before actually setting about any great change in the garden, thinking it out from all points and in all seasons; the time is not wasted but, to my mind, excellently well spent, because, once the change is made, it is very difficult to alter, and a greater waste of time is involved. Have the scheme well thought out and be able to see the effect before starting on it.

The pergola should always be straight; it need not be on a level, as it looks equally well on a slope, although on this point some writers disagree with me. Generally speaking, for small gardens it should be of as light a structure as possible, that is, as light as it can be consistently with durability; where there is a large surrounding space, a more solid structure may be desirable.

Under the light pergola the path should be of grass and not of gravel. There is nothing more pleasing to the eye than the shaded green way under the roof of roses and other climbing plants.

As regards *structure*, durability is the point to

be most considered; for the bold pergola, the pillars may be made of stone, brickwork or rubble, either round or square, but if the question of expense comes in, such a structure as this will not be suitable.

These pillars should be about fourteen inches across, eight feet in height, and from eight to ten feet apart; the pillars should stand in pairs, one on each side of the path, leaving about eight feet space for the pathway between them; connecting beams should be laid and fastened on the tops of these, either oak or larch being used, and lighter branches tied on to them running parallel with the path to carry the plants.

If the pergola is to be built entirely of wood, avoid using material such as the Scotch fir, which will rot in the ground in three or four years. It is very annoying to have to replace these and difficult to do so without hurting the creepers, which by this time should have reached well up to, and be covering, the roof. Oak is the best, next to this larch or sweet chestnut; whichever of these is used, it is as well to char the ends that are to be in the ground, and then to give them a good coating of tar, allowing for three feet of the post underground. At a little more expense wrought-stone supports can be used, the posts resting on these, with a pointed iron pin connecting the one with the other; this prevents rotting of the post, and will prove very lasting. Another method, which would probably prove to be satisfactory, is to embed the posts in concrete to just above the level of the ground, but I cannot vouch for it from personal experience. No roof will be re-

quired for the first year or two, until the climbers have grown well up the posts; the lighter pieces of wood for supporting them can be added as required. As a general rule the spaces between the posts on either side of the pathway should be left fairly open, they should not be filled in with growth, else lightness in appearance will be sacrificed. The plants should not be kept too trim; tie in what shoots are necessary and then let them grow as they please; there is no prettier sight than the long festoons of rose sprays, covered with bloom, hanging down from the tops of the arches on either side; if too much pruning and tying in is done much of this effect is lost.

If wood is out of the question, stout iron pillars can be used connected across at the top by iron bars; strong wire can be used for the roof, a few strands going across in different directions being sufficient to form a support.

A LIGHT PERGOLA

## PILLARS AND TRELLIS

The stout growing climbers require a substantial pillar, this may be made of either a growing tree or an old tree stem ; for lighter and more adaptive work posts of oak or larch may be used, or an upright iron framework. A long line of pillars standing alone, or else connected by chains hanging in festoons, covered with roses, clematis and other climbers, is a great feature in a garden ; the pillars may be formed of posts placed in groups, so as to give greater width, and these, when well covered, are also very effective.

Trellis may be built in numerous different ways, and of all kinds of material. One of the best is built of split fir trees, or, better still, larch, about five inches across, and nailed on in the criss-cross fashion ; with good posts and rails it is very durable. For a trellis support up a house, either wire or wooden laths, painted, may be used. By a little ingenuity various patterns of trellis may be devised, those with irregular spaces being both pleasing in their variety and rustic in appearance. The height of the trellis must depend entirely on the surroundings and nature of the spot in which it is to be placed, and on the purpose for which it is intended.

Generally speaking, the more rustic the trellis is, the better it looks. For this purpose it is a good plan to keep the bark on the wood. Whatever is used for the cross pieces, be sure to have good posts and rails to support them on, as it is a very troublesome business to insert fresh posts when the trellis is covered with creepers. A capital trellis fence may be made with roofing battens of foreign deal; they are a little more expensive, but if stained with some wood preservative, and with good posts and arris deal rails, so that the rain drains off them, the whole structure should last for many years.

It is impossible to do more than make these few suggestions, as the ways of building trellis are almost unlimited in number, and much depends on the position it is to occupy, the height required, the nature of the plants it is to carry, and on what timber the locality supplies.

## ROSES FOR THE PERGOLA AND PILLAR

Strong-growing roses should be planted in order to form a covering for the roof of the pergola, but since many of these become very "leggy" and bare at the sides, other and more dwarf varieties should be put in after the taller kinds have reached the top (in the second or third year) to cover the side pillars. Care must be taken to select those roses that adapt themselves to the pergola, and the more evergreen these are the better is the effect, since the foliage provides a screen all the year round. When the time for pruning arrives, the pillar roses can be untied and allowed to fall loose, and all the dead wood and any unnecessary shoots of the taller sorts can be removed; the dead wood of the pillar roses can be cut out and any necessary pruning done, and then these may be re-tied. Summer pruning for these roses produces excellent results; after the flowering season in July is over, cut away old wood that has flowered to within a foot of the base, and tie in strong, young shoots, mulch and water well. In late September or in October shorten the new long shoots by a few inches in order to check the sap;

this will assist both in ripening the shoots and in encouraging the growth of flowering eyes for the next year.

If all pruning is left to the spring the task will be much more difficult, there is so much to be done, and it is hard to know where to begin and where to stop; the tangled mass of dead wood and young shoots is so thick that despair is apt to seize hold of one at the task that is to come; the only way is to harden one's heart and attack it boldly and remorselessly.

The following is a list of some of the best roses for pergolas and pillars; it is taken from the *Handbook on Pruning Roses,* published by the National Rose Society in 1905. I am indebted to the committee of the N. R. S. for their kind permission to make use of it.

PATH OF THE WAY — TIGOLA

## THE BEST ROSES FOR PERGOLAS

### LIST I

(CLIMBING ROSES COMPLETE IN THEMSELVES FOR THIS PURPOSE)

*Summer Flowering Varieties*

Alpina fl. pl. (Boursalt).
Arvensis (Species).
Bennett's Seedling (Ayr.).
Crimson Rambler (Mult. Scan.).
Dundee Rambler (Ayr.).
Electra (Mult. Scan.).
Felicité-Perpétue (Evergreen).
Flora (Evergreen).
Mme. Plantier (H.B.).
Repens fl. pl. (Ayr.).
Ruga (Ayr.).
Setigera and its Hybrids.
Splendens (Ayr.).
The Garland (H.C.).
Tea Rambler (T.).
Wallflower (Mult. Scan.).

*Wichuriaina Hybrids*

As these always break freely into new growth, the strong new base shoots will require tying in once or twice during the summer.

Albéric Barbier.
Dorothy Perkins.
François Foucard.
Gardenia.
Jersey Beauty.
Paul Transon.
Pink Roamer.
René André.
Rubra.

*Perpetual Flowering Varieties*

Belle Vichysoise (N.).
Climbing Aimée Vibert (N.).
Longworth Rambler (H.T.).
Mme. A. Carrière (H.N.).
Paul's Single White (H.P.).

## LIST II

### (TALL KINDS FOR OVERHEAD)

*Summer Flowering Varieties*

THE MULTIFLORAS, ETC.

Aglaia (Mult. Scan.).
Alba (semi-double) (Alba).
Brunonis.
Carmine Pillar (H. of Species).
C. F. Meyer (Rugosa).
Claire Jacquier (tender) (Mult. Scan.).
Eleanor Berkeley (Mult. Scan.).
Electra (Mult. Scan.).
Euphrosyne (Mult. Scan.).
Inermis Morletti (Boursault).
Multiflora (Species).
Multiflora grandiflora (H. of Species).
Thalia (Mult. Scan.).
Una (H. Briar).

*Perpetual Flowering Varieties*

Alister Stella Gray (N.).
Bardou Job (H.T.).
Bouquet d'Or (Dijon T.).
Climbing Cramoisie Superieure (C.).
Duchess d'Auërstadt (Dijon T.).
Gloire de Dijon (Dijon T.).
Mme. Bérard (Dijon T.).
Mme. I. Péreire (Boursault).
Noëlla Nabonnand (T.).
Ophirie (N.).
Progress (H.T.).
Reine Olga de Wurtemburg (H.T.).
Rêve d'Or (N.).
The strongest climbing H.P.'s.

## LIST III

### (DWARF KINDS TO PLANT WITH THOSE ON LIST II)

*Summer Flowering Varieties*

Andersoni (Species).
Austrian Briars (A. Briar).
Hebe's Lip (S. Briar).
Leuchstern (Mult. Scan.).
Lucida (Species).
Macrantha (Species).
Mrs. O. G. Orpen (Damask).
Rosa Mundi (Gall.).
Rubin (Mult. Scan.).
Rubifolia (Species).
The Lion (Mult. Scan.).

*Perpetual Flowering Varieties*

Armosa (Hermosa) (Boursault).
Boule de Neige (H.N.).
Climbing Mrs. W. J. Grant (H.T.).
Comtesse de Turenne (Mme. Wagram) (H.T.).
Fellenberg (N.).
François Crousse (T.).
Gloire des Rosomanes (H. Bour.).
Gloire Lyonnaise (Dijon T.).
Gruss an Teplitz (H.T.).
Gustave Regis (H.T.).
L'Idéal (N.).

Some of the taller growing Teas, such as Marie van Houtte, may be used where they will grow sufficiently well.

## A LIST OF SOME FRAGRANT PLANTS

Abelia triflora.
Abobra viridiflora.
Actinidia polygama.
Akebia quinata.
„ ternata.
Apios tuberosa.
Azara Gilliesii.
„ integrifolia.
Calycanthus floridus.
„ lævigatus.
Carpentaria Californica.
Caryopteris mastacanthus.
Centrosema grandiflora.
Chimonanthus fragrans.
Choisya ternata.
Clematis campaniflora.
„ crispa.
„ flammula.
„ Fortunei.
„ montana.
„ paniculata.
„ virginiana.
Corylopsis spicata.
Drimys Winteri.
Feijoa Sellowiana.
Forsythia suspensa.
Holbœllia latifolia.
Ipomæa bona-nox.
Jasminum nudiflorum.
„ odoratissimum.
„ officinale.
Lathyrus odoratus.
Lippia citriodora.
Lonicera (var. kinds).
Magnolia glauca.
„ obovata.
Myrtus communis.
Osmanthus fragrans.
Osteomeles anthyllidifolia.
Philadelphus (var. kinds).
Rosmarinus officinalis.
Viburnum odoratissimum.
Wistaria sinensis.

## SOME WINTER AND SPRING FLOWERING PLANTS

The following list has been compiled for those who may wish to plant climbers, etc., that blossom during the winter and early spring; many of these naturally overlap, and the list must therefore not be regarded as rigidly referring only to the months under which they are classed. A good deal depends on the locality and the season.

### *October and November*

Azara integrifolia.
Benthamia fragifera.
Calycanthus occidentalis.
Clematis flammula.
Clematis tubulosa.
Eriobotrya japonica.
Kerria japonica.
Lapageria rosea.
Lonicera fragrantissima.
Passiflora cærulea.

### *December*

Chimonanthus fragrans.
Hamamelis arborea.
Jasminum nudiflorum.
Kerria japonica.

### *January*

Akebia lobata.
Chimonanthus fragrans.
Hamamelis arborea.
Jasminum nudiflorum.
Kerria japonica.
Rosa indica.

### *February*

Corylopsis spicata.
Enkianthus japonicus.
Lonicera fragrantissima.

*March*

Abelia floribunda.
Akebia quinata.
Clematis cirrhosa.
Clianthus Dampieri.
Forsythia viridissima.
Garrya elliptica.
Halesia tetraptera.
Piptanthus Nepalensis.
Prunus Pissardii.
,, triloba.
Ribes speciosum.
Rosa indica.

*April*

Adenocarpus frankenioides.
Ceanothus (various).
Clematis florida.
Cotoneaster buxifolia.
,, microphylla.
Cydonia Maulei.
Fremontia californica.
Garrya elliptica.
Halesia tetraptera.
Lonicera Periclymenum.
Piptanthus Nepalensis.
Prunus Pissardii.
,, triloba.

LOQUAT (ERIOBOTRYA JAPONICA) GROWING AGAINST A COTTAGE WALL IN CORNWALL

# TENDER CLIMBERS AND WALL-SHRUBS IN THE SOUTH-WEST

By S. W. FITZHERBERT

Few residents in the colder parts of England have any idea of the number of tropical plants that can be grown unprotected in the open air, under the propitious atmospheric conditions that prevail on the southern shores of Devon and Cornwall, along which the warm waters of the Gulf Stream slowly drift. In that favoured locality denizens of Australia, New Zealand, the Cape of Good Hope, South America and India are to be met with growing as freely as in their native habitats, and the blossoming of rare shrubs and climbers that elsewhere can be cultivated only under glass protection, may be enjoyed by the flower-lover under the blue sky amid the natural surroundings of picturesque gardens. All the plants mentioned in this article have been seen by the writer growing in the open, in the numerous interesting gardens that the south-west is noted for.

*Abelia floribunda*. Mexico. A beautiful evergreen shrub bearing clusters of drooping rose-pink flowers about 3 inches in length. Generally grown against a wall, but occasionally as a bush.

*Abutilon megaponticum* (*Syn.* A. vexillarum). Rio Grande. A handsome evergreen, bearing pendent, bell-shaped flowers with crimson sepals, yellow petals and dark-brown stamens on slender, arching shoots 8 feet in length. There is a variegated form of this.

*Acacia*. Australia. The majority of the Acacias, which are fairly common in the south-west, are unsuited for covering walls and are grown as trees. Two, however, A. cultriformis, from New South Wales, and A. platyptera, from Swan River, make good wall-plants and will cover an expanse 10 feet square.

*Araujia sericifera* (*Syn.* Physianthus albens). Brazil. An evergreen climber bearing a profusion of white bladder-shaped flowers, many of which are often carried until December. Where it has space it will attain a height of 30 feet or more. Numbers of insects are captured by the flowers. In some gardens it perfects its great corrugated seed-pods, which are often almost 12 inches in circumference.

*Berberidopsis corallina*. Chili. An autumn-flowering evergreen climber ; a brilliant picture when bearing its racemes of bright crimson blossoms. Succeeds best on a partially-shaded wall.

*Bignonia*. Of the tender species, many of which are beautiful climbers, B. capensis (now called Tecoma capensis), Cape of Good Hope, orange; B. buccinatoria (*Syn.* B. cherere), Guiana, orange-scarlet ; and B. speciosa, Uruguay, pink, are sometimes met with.

*Bignonia dentata*. Cape of Good Hope. Bears large yellow flowers.

*Billardiera longifolia*. Tasmania. A very free-growing and profusely-flowering evergreen climber bearing yellow blossoms.

*Bougainvillea glabra*. Brazil. Scarcely a success in the open, but has borne its pale pink flowers in at least three gardens, against a south wall.

*Brachysema*. B. acuminatum. Australia. A handsome evergreen climber, bearing scarlet flowers. B. lanceolatum. Swan River. Rich scarlet blossoms.

*Bucklandia populnea*. Himalayas. A noble evergreen climber with large, heart-shaped leaves, tinted bronze and maroon. Said to grow to a height of 100 feet in its native habitat.

*Cæsalpinia Gilliesii* (*Syn.* Poinciana Gilliesi). South America. An evergreen shrub, bearing clusters of large yellow flowers with bright red, far-protruding stamens. Its foliage is acacia-like. A strikingly handsome plant but seldom met with.

*Calliandra Tweedii* (*Syn.* Inga pulcherrima). Mexico. An evergreen shrub, bearing bright scarlet flowers in the summer. Its foliage is delicately cut.

*Callicarpa purpurea*. India. An evergreen shrub, bearing small, inconspicuous flowers, followed by violet berries.

*Camellia reticulata*. China. Hardy, but usually grown against a wall for the protection of the flowers, which are often 7 inches across, and are deep rose-pink, and semi-double, with a central cluster of golden stamens. The queen of the Camellias. Occasionally grown as a bush.

*Cantua buxifolia* (*Syn.* C. dependens). Peru. A very lovely evergreen shrub, bearing drooping clusters of red flowers about 4 inches long and 2 inches across the mouth. Generally grown against a wall.

*Cassia corymbosa*. Buenos Ayres. A deciduous shrub, almost invariably grown against a wall and ascending to a height of 15 feet or more. In August it is a mass of golden-yellow blossom, some of which is often retained until Christmas.

*Ceanothus*. America. Almost all these are grown as bush plants, but may sometimes be seen reaching the eaves of a house over 20 feet from the ground.

*Cestrum* (*Syn.* C. habrothamnus). Evergreen shrubs, sometimes trained on walls. Those most generally met with are C. aurantiacum, Guatemala, orange; C. Endlicheri (*Syn.* C. corymbosum), red; C. elegans, purple-red, and C. roseum, pink; all from Mexico.

*Chorizema*. Australia. Well-known evergreen conservatory plants, bearing red and orange flowers. They grow to a height of 7 feet in the open, and commence to bloom late in March.

*Clematis indivisa lobata*. New Zealand. A lovely climber, garlanding walls with thousands of large white flowers at the end of March, in Devon and Cornwall.

*Clianthus puniceus*. New Zealand. An evergreen, bearing large, brilliant crimson flowers, somewhat resembling lobsters' claws in shape. It occasionally commences to bloom at Christmas, but it is at its best in May, when it is a sheet of crimson. Generally trained against a wall, but sometimes grown as a bush. There is a white variety of this.

*Colquhounia coccinea.* Nepaul. A deciduous shrub, bearing scarlet flowers.

*Cytisus fragrans.* Teneriffe. A common greenhouse plant, usually termed Genista, bearing long spikes of yellow flowers. Huge bushes are grown in the south-west, and lofty houses are sometimes covered to the eaves with trained plants, very beautiful when golden with bloom.

*Daphne odora* (*Syn.* D. indica). India. An evergreen shrub, producing clusters of white or purple, deliciously scented flowers in the winter and early spring.

*Elæocarpus cyaneus.* Australia. A shrubby evergreen plant bearing bluish-white flowers.

*Ercilla* (*Bridgesia*) *volubilis.* Chili. A self-clinging evergreen climber, bearing small purplish flowers.

*Hibbertia.* Australia. H. dentata is an evergreen climber, with bronzed leaves, bearing yellow flowers 2 inches across in the spring. H. Readii also has yellow blossoms.

*Holbœllia latifolia* (*Syn.* Stauntonia latifolia). Himalayas. An evergreen climber, with oval, leathery leaves of great consistence, bearing, in April, clusters of greenish-white flowers that are delightfully fragrant. Where this is grown against a house, all the rooms are filled with its perfume when in bloom. Its scent is its one recommendation as it is by no means a striking plant.

*Hydrangea petiolaris.* Japan. A deciduous self-clinging climber, bearing large white flower-heads, chiefly composed of fertile blooms, and therefore not particularly showy. It will ascend an oak trunk to a height of 30 feet. It

is often confounded with Schizophragma hydrangeoides.

*Ipomæa purga* (*Syn.* I. exogonium). Mexico. The Jalap plant. One of the Convolvuli, bearing large crimson flowers in autumn.

*Kennedya*. Australia. These, with their allies the Hardenbergias, range in colour from deep purple to white. They are evergreen climbers, occasionally met with on warm walls in the open.

*Lapageria*. Chili. Extremely handsome evergreen climbers, bearing long, wax-like flowers of white and red. Grown in peat against a north wall they succeed admirably in the open in the south-west, and are at their best in October and November, often holding many of their blossoms until after Christmas.

*Lonicera Hildebrandi*. Burmah. A giant honeysuckle, bearing deep yellow, very sweetly scented flowers, 4 inches in length.

*Luculia gratissima*. Himalayas. An evergreen shrub, bearing large flower-heads of pale-pink fragrant blossoms in the late autumn.

*Mandevilla suaveolens*. Buenos Ayres. A charming deciduous climber, bearing large white, sweetly-perfumed flowers in August. It often perfects seed in the south-west.

*Manettia luteo-rubra*. Rio Janeiro. An evergreen climber, bearing tubular flowers, bright scarlet on the lower portion and clear yellow above. A plant smothered in thousands of blossoms is a brilliant sight when in full bloom.

*Mimulus glutinosus*. California. Better known as Diplacus glutinosus. An evergreen shrub, bearing buff flowers and reaching a height

of 6 feet. There is a variety with dark, orange-maroon blossoms.

*Mitraria coccinea.* Chiloe. An evergreen shrub, producing brilliant scarlet, urn-shaped drooping flowers about 2 inches in length. Its habit is naturally somewhat prostrate, but it accommodates itself well to training against a wall and will attain a height of 5 feet or more. Its native habitat is one of the wettest places in the world.

*Nerium oleander.* Mediterranean region. The Oleander is well-known as a greenhouse plant, and often to be seen flowering well as a bush, in sheltered spots in the south-west during the autumn. Both red and white varieties are used as wall plants and have a pretty effect when in flower.

*Pentstemon cordifolius.* California. An evergreen shrub of climbing habit, bearing rich crimson flowers in great profusion. It succeeds well on a south wall and will reach a height of 7 feet.

*Phœnocoma prolifera.* Cape of Good Hope. An evergreen shrub, producing purple-red blossoms bearing a certain resemblance to everlasting flowers, and remaining fresh for a long period.

*Plumbago capensis.* Cape of Good Hope. A climbing evergreen shrub, bearing flat flower heads of a beautiful pale blue tint in August and September. On warm south walls it is often a mass of bloom and creates a charming picture, as its colour is almost unique in the garden. There is a white variety, but this is inferior to the type from a decorative point of view.

*Polygala*. Bahia. Well-known greenhouse plants. P. myrtifolia grandiflora (*Syn.* P. grandiflora) is often grown in the open both as a bush and against a wall. It is an evergreen, and bears purplish-rose and white flowers.

*Pueraria Thunbergiana*. Khasia. A handsome evergreen climber, with somewhat vine-like leaves 5 inches in diameter, and bearing blue flowers.

*Rhodochiton volubile*. Mexico. A fast-growing climber, bearing blood-red, drooping flowers. It is a perennial, but in common with other perennial climbers, such as Lophospermum scandens, Maurandya Barclayana and Cobæa scandens, is generally killed in the winter, but in certain Cornish gardens it maintains its perennial habit.

*Rhododendron*. Sikkim. Some of the tenderer species such as the so-called greenhouse Rhododendrons of the R. fragrantissimum section are usually cultivated as wall-plants, as are R. Nuttalli and R. Dalhousiæ.

*Semele androgyna* (*Syn.* S. ruscus). Canary Islands. An evergreen climber, valuable for its striking foliage. Its leaves, or cladodes, are of brightly polished green and are over a foot in length, being furnished with from twelve to twenty pinnate sections. The leaves are very persistent, remaining fresh for seven years or more. It is a rampant grower, often attaining a height of over 30 feet. In Cornwall it produces its inconspicuous flowers, followed by scarlet berries.

*Solanum Wendlandi*. Costa Rica. A very beautiful evergreen, climbing shrub, but rarely

seen in the open on account of its tenderness. It bears large clusters of lilac-blue flowers 2½ inches in diameter.

*Solanum aviculare* (*Syn.* S. laciniatum). New Zealand. This is far hardier than the last named, and bears purple, golden-centred flowers of about the same size, followed by large, bright yellow, egg-shaped fruits. It is often grown as a bush. Evergreen.

*Solanum crispum.* Chili. A still hardier species, bearing dense clusters of lavender flowers with yellow eyes. These often entirely cover the plant in May. It may be grown as a bush or against a wall. This also is evergreen.

*Solanum jasminoides.* South America. A lovely, evergreen climber, bearing large clusters of pure white flowers in profusion. It is practically hardy in the south-west, where it is very common, and when cut back in unusually severe winters it never fails to break strongly in the spring. It is a very quick grower and has the longest flowering period of any climber, commencing to expand its blossoms in May, being at its best in September, and often holding flowers until after Christmas.

*Sollya heterophylla.* The Australian Bluebell Creeper. A beautiful evergreen, climbing shrub, bearing innumerable small, pendent, gentian-blue flowers through many months of the year. The first blooms usually open early in June, and the plants often continue to flower until November.

*Sophora* (*Syn.* Edwardsia). New Zealand. Two species, S. microphylla and its variety S. tetraptera are generally grown, both bearing

bright yellow flowers in the spring. Trained on walls or grown as bushes.

*Streptosolen Jamesoni.* Columbia. A very showy, evergreen shrub, much used for decorating the walls and pillars of conservatories. It bears panicles of brilliant orange-red flowers and is a gorgeous sight when in full bloom. Though rarely met with in the open, it has been noted doing well in two gardens in the south-west.

*Swainsonia albiflora.* Australia. A leguminous, evergreen shrub, bearing white, Lathyrus-like flowers in long racemes. It is a common occupant of the conservatory and greenhouse. Occasionally it is cut down by winter frosts, but when this is the case it breaks strongly again in the spring. It is invariably grown against a wall and is very pretty when in flower.

*Tacsonia mollissima.* Quito. A very vigorous, evergreen climber, bearing pink flowers, having tubes from 4 inches to 5 inches in length. On a cottage in Cornwall it produces seed-pods freely. Though Quito is on the equator its altitude is 9,600 feet above sea-level, and its temperature is therefore not unduly hot.

*Tacsonia Van Volxemi.* New Grenada. This is very generally grown as a conservatory climber. It bears very showy crimson flowers. It grows well over the front of a house in Cornwall, facing south.

*Tacsonia exoniensis.* A hybrid between T. Van Volxemi and T. mollissima. It bears flowers of a bright rosy-pink.

*Thladiantha dubia.* India and China. A climber, bearing rather large yellow flowers. These are followed by oval, crimson fruit, from 2 inches

to 3 inches in length, in the autumn. It is a fairly hardy plant.

*Thunbergia natalensis.* Natal. An evergreen climber, bearing handsome pale-blue flowers with yellow throats.

*Tibouchina semidecandra* (*Syn.* Lasiandra macrantha). Brazil. A beautiful evergreen shrub, producing large deep-violet flowers in the autumn. Usually dies down in the winter, but breaks again strongly in the late spring.

*Trachelospermum jasminoides* (*Syn.* Rhyncospermum). Shanghai. An evergreen climber, bearing countless small, starry, white flowers in August. These are deliciously scented. It blooms for a long period, plants being still covered with blossom in November. It has proved quite hardy in the south-west and is to be seen in numbers of gardens. In one case the entire porch of a house is garlanded with it.

*Tricuspidaria dependens* (*Syns.* T. hexapetala, Crinodendron Hookeri). Chili. A particularly handsome evergreen shrub, bearing a profusion of large, drooping, cherry-crimson flowers on long peduncles. Usually grown as a bush but occasionally as a wall shrub. It has borne seed in the open in one garden.

*Veronica Hulkeana.* New Zealand. This is the most lovely of all the shrubby Veronicas. Though it will grow as a bush it is seen at its best when trained against a wall. When grown in this manner the branched flower-sprays, about 2 feet in length and studded with hundreds of small, lavender flowers, stand out from the wall and give a large plant, on which there are often over 200 flower-spikes, the appearance of a cloud

of lavender. Plants sometimes attain a height of 6 feet and a breadth of 8 feet. Old specimens have, unfortunately, a way of sometimes dying off unaccountably. The shrub is evergreen.

*Vitis* (*Syn.* Cissus) *discolor*. Java. A climber bearing greenish-yellow blossoms.

ABELIA UNIFLORA

# ALPHABETICAL LIST OF PLANTS

ABELIA CHINENSIS (*Rock Abelia*) Caprifoliaceæ. China. 1844. 5 feet. Deciduous. Pink and white. September. Cuttings under glass in summer; layers in spring. *Syn.* A. rupestris; A. uniflora; Linnæa Chinensis.

This creeper is a trfle more hardy than A. floribunda, and may be grown in warm, sheltered positions; it likes to be planted on a raised bank in light soil; if grown in the greenbouse but little pruning is required. The variety grandiflora is sprung from a seedling of Italian origin. It is a shrub of more vigorous growth than the parent, and bears large, pinkish-white flowers.

ABELIA FLORIBUNDA (*Free-blooming Abelia*) Caprifoliaceæ. Mexico. 1842. 3 feet. Evergreen. Rose-purple. March. Cuttings under glass in summer; layers in spring. *Syn.* Linnæa floribunda.

A beautiful plant for low walls or trellis, but hardy only in very sheltered spots in the southern counties. The soil that is best suited for it is a mixture of equal parts of loam and peat, with a fair amount of sharp sand.

ABELIA TRIFLORA (*Three-flowered Abelia*) Caprifoliaceæ. Hindostan. 5 feet. Evergreen. Pale yellow, tinted with pink. September. Cuttings under glass in summer; layers in spring. *Syn.* Linnæa triflora.

This plant is not very hardy, and requires protection in winter. If grown in peaty soil mixed with sand it will soon cover a wall in the greenhouse.

ABOBRA VIRIDIFLORA (*Green-flowered Abobra*) Cucurbitaceæ. Brazil. Perennial. Green ; small scarlet fruit. Late summer. Seed in April.

This ornamental gourd is a somewhat tender climber, thriving well in a warm sunny spot, in a light soil. The seeds should be sown under glass, and the young plants put out in the middle of June ; the tuberous roots can be taken up in the autumn and stored in a greenhouse. It is a suitable plant for training up arches or over trellis.

ACTINIDIA CHINENSIS Ternstrœmiaceæ. China. 1905. Deciduous. Yellow. Summer. Seeds ; layers ; cuttings.

This plant has been recently introduced by Messrs. Veitch & Sons, who state that it is a climber in habit, with leaves resembling those of a vine, dark green on the surface, densely tomentose beneath, and, when first produced, thickly covered with bright red hairs. It has not yet flowered in England, but in its native country it produces handsome yellow flowers, 1½ in. in diameter, borne in clusters on dwarf shoots. These are succeeded by edible fruits having the size of walnuts and the flavour of ripe gooseberries. The plant may be grown on a pillar or pergola in the open.

ACTINIDIA KOLOMIKTA Ternstrœmiaceæ. China and Japan. 1880. Deciduous. White. Summer. Seeds ; layers ; cuttings under a hand-light in sandy soil in autumn. *Syns.* Kolomikta mandschurica ; Trochostigma Kolomikta.

An ornamental creeper which is very little grown, although it is perfectly hardy ; it is very well adapted for trellis, walls and verandahs, liking a support for its twining stems. In the autumn the leaves change to red and white and are very effective. Plant in a light rich soil.

ACTINIDIA POLYGAMA Ternstrœmiaceæ. Japan. 1870. Deciduous. White. Summer. Seed ; layers ; cuttings under a hand-light in sandy soil in autumn. *Syn.* Trochostigma polygama.

This species bears fragrant, waxy white flowers and edible fruits.

ACTINIDIA VOLUBILIS Ternstrœmiaceæ. Japan. 1874. Deciduous. White. June. Seed; layers; cuttings under a hand-glass in sandy soil in autumn. *Syn.* Trochostigma volubilis.

A very free-growing species, with small, white flowers.

ADENOCARPUS DECORTICANS Leguminosæ. Spain. 1883. From 4 to 6 feet. Evergreen shrub. Bright yellow. May. Seed; layers.

A pretty Furse-like shrub, which is only half hardy; it should therefore be given the shelter of a south wall and protected in winter in cold localities. A specimen may be seen growing on the wall at Kew Gardens.

ADENOCARPUS FRANKENIOIDES Leguminosæ. Teneriffe. 1815. 3 feet. Yellow. April. Seeds; layers. *Syn.* A. Anagyris.

A half-hardy evergreen shrub, which must have protection in winter.

ADLUMIA CIRRHOSA (*Climbing Fumitory—Alleghany Vine*) Fumariaceæ. N. America. 1778. 15 feet. Herbaceous. White or purple. August. Seeds. *Syn.* Corydalis fungosa.

A rapid-growing climber, which thrives in any good garden soil, delighting to twine its long slender stems over other shrubs. It is a biennial; the seeds should be sown in the autumn, and the young plants kept under glass until the following spring; in many places, however, the seed, which is borne profusely, comes up of itself without being sown.

AKEBIA LOBATA (*Three-leaved Akebia*) Berberideæ. China and Japan. 1895. Evergreen. Pale purple. January. Cuttings; root division.

A tall, climbing shrub, sufficiently hardy for any but very cold localities; in very sharp winters some protection ought to be given. The flowers are borne in a hanging raceme. This species may be distinguished from A. quinata by the leaves being trifoliate.

AKEBIA QUINATA (*Five-leaved Akebia*) Berberideæ. China. 1845. 12 feet or more. Evergreen. Purple. April and May. Cuttings; root division.

A pretty twining shrub, not commonly met with. It is fairly hardy, and may be used for pergolas and trellis; in cold localities it should be given the shelter of a wall or allowed to twine over and among other evergreen shrubs; the flowers are borne in axillary racemes and are very fragrant, especially at night. Plant in loam, sand and leaf mould.

AMPELOVITIS DAVIDI (*David's Vine*) Ampelideæ. N. China. 1889. Deciduous climber. Green; fruit black, borne in loose bunches. Summer. Cuttings with a good eye in September, under a handglass in sandy soil, or cuttings of the young wood in spring, in gentle heat. *Syn.* Vitis Davidi.

A plant closely allied to the vines and Virginian creepers.

AMPHICARPÆA MONOICA (*Hog Pea Nut—Wild Bean Vine*) Leguminosæ. N. America. 1781. 4 feet. Violet and white. September. Seed; root tubers.

A quaint, hardy, perennial twiner, growing after the habit of the scarlet runner bean. It is quite hardy and will thrive in most soils.

ANAGYRIS FŒTIDA Leguminosæ. S. Europe. 1750. From 6 to 8 feet. Half hardy shrub. Yellow. May. Cuttings in July, planted in sand under a handglass.

This plant may be seen growing on the wall at Kew Gardens. It may require protection in winter. The flowers are like those of the laburnum, in short racemes. When any portion of the plant is bruised a fœtid odour is given out.

ANTHYLLIS BARBA-JOVIS Leguminosæ. Spain. 1640. From 4 to 8 feet. Evergreen wall shrub. Pale yellow. March. Young cuttings in sand under a bell-glass in a cool frame.

A good shrub, blooming early in the year, which does very well when grown on a south wall. In cold localities it probably will not thrive at all, as it cannot be considered quite hardy.

APIOS TUBEROSA (*Tuberous-rooted Wistaria*) Leguminosæ. N. America. 1640. 6 feet. Herbaceous. Purplish-brown. August. Seed; division of tuberous roots. *Syns.* Glycine Apios; Apios Apios.

A pretty plant for arches and low trellis, it may also be used for running over shrubs. It requires a good soil and a moist, sheltered position. The flowers are fragrant, their odour somewhat resembling that of the violet.

APLOPAPPUS ERICOIDES Compositæ. California. From 2 to 5 feet. Evergreen wall shrub. Yellow. Summer. Seed; division. *Syns.* Haplopappus ericoides; Diplopappus ericoides; Ericameria microphylla.

A shrub which seems to be sufficiently hardy if planted against a warm wall.

ARAUJIA GRANDIFLORA (*Big-flowered Araujia*) Asclepiadeæ. Brazil. 1837. Evergreen climber. White. September. Seed, in heat in the spring; stubby side shoots in summer, planted in sandy soil, in bottom heat or in a propagating case. *Syns.* A. graveolens; Physianthus auricomus; Schubertia grandiflora; S. Grahami.

A pretty climber bearing clusters of sweet-scented, funnel-shaped flowers. A warm wall in a mild locality, with protection in the winter, is recommended. Plant in a light peaty soil.

ARAUJIA SERICIFERA (*Silk-bearing Araujia*) Asclepiadeæ. Peru. 1830. Evergreen climber. White, pale rose when in bud. August. Seed, in a hot-bed in spring; stubby side shoots in summer, planted in sandy soil, in bottom heat or in a propagating case. *Syns.* A. albens; Physianthus albens.

A climber which is usually grown in a greenhouse, but it will thrive, if given a good position, against a warm wall in mild localities; some protection should, however, be given in winter. It is somewhat hardier than A. grandiflora. Plant in a light, peaty soil and give good drainage.

ARISTOLOCHIA SIPHO (*Dutchman's Pipe—Birthwort*) Aristolochiaceæ. N. America. 1763. From 15 to 30 feet. Deciduous. Yellow brown. May to July. Layers; cuttings from young shoots with a heel of old wood; strike in heat under a bell-glass. *Syns.* A. frutescens; A. macrophylla; Siphisia Sipho.

A capital climber for covering arches, walls, trees, etc.; it is grown chiefly for the large, heart-shaped foliage; the blossoms also are very quaint. This plant is quite hardy and will grow in any ordinary garden soil.

ARISTOLOCHIA TOMENTOSA (*Hairy Birthwort*) Aristolochiaceæ. N. America. 1799. From 10 to 20 feet. Deciduous. Purple. July. Seed; cuttings from young shoots, with a heel of old wood, in heat under a bell-glass. *Syns.* A. hirsuta; Siphisia tomentosa.

A smaller species than A. sipho, but it may be grown in similar positions.

BUDDLEIA GLOBOSA, GROWING AGAINST A TRELLIS

AIRSTOTELEIA BRAITHWAITEI Tiliaceæ. New Hebrides. 1881. Evergreen wall shrub. White; large flowers with fringed petals. Summer. Layers in autumn; cuttings in April under a glass, in sand.

This is a beautiful plant, but it must be planted in a warm, sheltered spot, as light frosts are apt to injure the points of the shoots, while sharp frosts may cut it down to the ground; some protection should therefore be given in winter.

ARISTOTELEIA MACQUI Tiliaceæ. Chili. 1733. 6 feet. Evergreen wall shrub. Whitish green. May. Layers in autumn; cuttings in April.

This plant is more hardy than A. Braithwaitei, but a warm position is to be recommended, as frost is liable to damage it. The flowers are succeeded by small, dark purple berries. There is a variegated form with more ornamental foliage, but it is less hardy. Any good garden soil will suit.

ASIMINA TRILOBA (*Papaw, Custard Apple*) Anonaceæ. Pennsylvania. 1736. 10 feet. Deciduous wall shrub. Purple, yellow centre. May. Layers in autumn; seed sown in pots and the seedlings sheltered until they have attained fair size. *Syns.* Anona triloba; Porcelia triloba; Uvaria triloba.

A plant suitable for training on walls, but it requires protection during the first winter of planting-out. The flowers are campanulate and large. Plant in loam mixed with leaf mould or peat.

AZARA DENTATA Bixineæ. Chili. 1830. 12 feet. Evergreen shrub. Yellow. June. Ripened cuttings in sand under glass, in slight heat. *Syn.* Quillaia petiolaris.

This shrub is hardy enough for the southern counties; elsewhere some protection should be given in winter. It grows well against a south wall.

AZARA GILLIESII Bixineæ. Chili. 1859. 15 feet. Evergreen. Yellow. Fragrant. May. Cuttings struck in sand under a glass with a little bottom heat.

A good wall plant, requiring some protection in winter, excepting in warm localities. Its toothed leaves resemble those of the holly in colour and texture. Plant in sandy loam mixed with leaf mould.

AZARA INTEGRIFOLIA Bixineæ. Chili. 1832. 18 feet. Evergreen. Yellow, very fragrant. Autumn. Cuttings struck in sand under a glass with a little bottom heat.

A good wall shrub, the leaves are entire and smooth. A variegated form is known, having its leaves greenish-yellow with a dark green mark. Some protection should be given during the winter, excepting in warm localities. Plant in sandy loam and leaf mould.

AZARA MICROPHYLLA Bixineæ. Chiloë Island, South America. 1873. 12 feet. Evergreen. Green. July. Cuttings struck in sand under a glass with a little bottom heat. *Syn.* Myrtophyllum chilense.

A very useful shrub for low walls and trellis, and of very neat habit. It is prized chiefly for its glossy foliage and for the orange-red berries which succeed the green flowers. It is hardy, but may require some winter protection in northern counties. Plant in sandy loam mixed with leaf mould.

BAUHINIA CORYMBOSA (*Mountain Ebony*) Leguminosæ. India. 1818. 6 feet. Shrubby, evergreen climber. Pinkish. Summer. Cuttings from moderately ripe shoots in sand under a glass in moist heat.

A rare climber, very seldom seen; it is said to have succeeded well in some parts of Britain. Plant in light sandy loam mixed with a little peat.

BAUHINIA YUNNANENSIS (*Yunnan Mountain Ebony*) Leguminosæ. Yunnan. 1903. White and purple. Summer. Cuttings in sand under a glass in moist heat.

This plant is but a recent introduction, and very little can as yet be said as to its growth in this country.

BERBERIDOPSIS CORALLINA (*Coral Barberry*) Berberideæ. Chili. 1862. Evergreen. Bright crimson. Summer. Seed; cuttings from the young wood in spring; layers in the autumn.

One of the most attractive of climbers, this plant does best planted against a wall in partial shade, where it is protected from cold draughts; it may also be grown on protected trellis. Plant in any good, well-drained, loamy soil. It has glossy, prickly leaves and numerous drooping flowers, which hang from the axils of the leaves, and are produced freely throughout the summer.

BERBERIS NEPALENSIS (*Nepaul Barberry*) Berberideæ. Nepaul. From 4 to 6 feet. Evergreen wall shrub. Yellow. June. Suckers; layers and ripened cuttings in the autumn; seed. *Syn.* Mahonia Nepalensis.

A Barberry that requires some protection in the northern counties, it should therefore be given the shelter of a wall in such localities.

BERCHEMIA RACEMOSA (*Supple Jack*) Rhamneæ. China and Japan. 1888. From 10 to 15 feet. Deciduous. Green, succeeded by dark-brown berries. Summer. Cuttings; seed.

A hardy, climbing shrub which is very seldom seen. It is well adapted for climbing over old tree stumps, and prefers partial shade. The variety Variegata has red shoots and variegated leaves.

BERCHEMIA VOLUBILIS (*American Supple Jack*) Rhamneæ. Carolina. 1714. 12 feet. Deciduous. Greenish-white. July. Cuttings; seed. *Syns.* Œnoplea volubilis; Rhamnus scandens.

A twining plant, somewhat shrubby in habit. Two other species, B. floribunda (white) and B. lineata (green) require greenhouse protection.

BUPLEURUM FRUTICOSUM (*Hare's Ear*) Umbelliferæ. Spain. 1596. 8 feet. Wall shrub. Yellow. July. Cuttings in March or April.

This shrub, which thrives very well against a wall, has curious, glaucous, sea-green foliage; the umbels of yellow flowers are borne profusely.

BIGNONIA CAPREOLATA (*Trumpet Flower*) Bignoniaceæ. N. America. 1710. 15 feet. Evergreen. Orange. June. Cuttings from the roots or from side shoots in spring or autumn under a handglass, with some bottom heat. *Syn.* Anisostichus capreolatus.

A very free growing climber, but it is hardy only in sheltered positions; a warm wall suits it best. In England it is commonly grown in the cool greenhouse. Whether it is planted out of doors or not, it likes a rich, well-drained soil of loam and peat, with plenty of water. The leaves are heart-shaped and end in a tendril, the trumpet-shaped flowers appear singly in racemes: var. Atro-sanguinea has reddish purple flowers.

BILLARDIERA LONGIFLORA (*Apple Berry*) Pittosporeæ. Van Diemen's Land. 1810. 20 feet. Evergreen. Greenish-yellow, frequently changing to purple. May to August. Seed sown in a little heat in April; cuttings in early summer struck in sand under a bell-glass. *Syn.* B. ovalis.

This is a very useful climber for the cool greenhouse, and it will thrive out of doors if placed in a warm, sheltered spot. It is very free-growing, and flowers

profusely; these are succeeded by attractive blue berries. Plant in fibrous loam and peat, adding a fair quantity of sand.

BLUMENBACHIA CHUQUITENSIS Loasaceæ. Peru. 1863. Half hardy perennial. Red and yellow. September. Seed in gentle heat in spring.

A pretty climber for a low trellis, the flowers consist of about ten boat-shaped petals, red on the outside and yellow within. After raising the seedlings and hardening off, these may be planted out in any ordinary garden soil.

BOMAREA CARDERI Amaryllideæ. Columbia. 1876. 8 feet. Half hardy twiner. Rose and purple-brown. November. Seed in heat; division of the fibrous root stock.

The genus Bomarea is allied to Alströmeria, from which the species differ in their twining habits. The handsome flowers and easy culture in the cool greenhouse, with the probability of their succeeding in the open in warm, favoured localities, should cause these plants to be general favourites. Plant in well-drained soil made of peat, leaf mould and sand; water well while growing but rest in winter.

BOMAREA OLIGANTHA Amaryllideæ. Peru. 1877. 8 feet. Half hardy twiner. Red and yellow. Autumn. Seeds in heat; division of the fibrous root stock.

This species may prove to be sufficiently hardy in a very mild place. (For culture see under B. carderi.)

BOMAREA SHUTTLEWORTHII Amaryllideæ. Bogota. 1881. 8 feet. Half hardy twiner. Orange red and canary yellow. Autumn. Seeds in heat; division of the fibrous root stock.

(For culture, etc., see under B. carderi.)

BRYONIA DIOICA (*White Bryony*) Cucurbitaceæ. British Isles. 7 or 8 feet. Herbaceous. Greenish-white. May to September. Seed; division of tubers.

This pretty, indigenous climber may well be brought into the garden to be grown over rough places and to climb over hedges. The foliage is very graceful, it is a rapid grower and, in autumn, the flowers are succeeded by round, red berries.

BUDDLEIA COLVILLEI Loganiaceæ. Sikkim Himalaya. 1892. 6 feet. Evergreen shrub. Rose coloured. June to August. Well-ripened cuttings (with a heel of older wood) in a cool frame in September, placed in sand or sandy loam; water sparsely until rooted. *Syn.* Romana Colvillei.

A fine shrub, bearing large flowers (resembling in shape those of the Pentstemon) and silvery grey foliage. It has proved hardy around London, but it should be placed against a south-west wall, or, as a bush, in a warm corner, in a well-drained soil. This species is quite distinct from the others in the same genus.

BUDDLEIA GLOBOSA (*Orange-ball Tree*) Loganiaceæ. Chili. 1774. From 15 to 20 feet. Orange. May. Well-ripened cuttings (with a heel of older wood) in a cool frame in September, planted in sand or sandy loam; water sparsely until rooted. *Syns.* B. capitata; Romana globosa.

A plant which is generally grown as a bush, but a south or south-west wall is an excellent situation for it. Plant in well-drained, poorish soil and train loosely; this encourages a large number of flowers which resemble small oranges.

BUDDLEIA VARIABILIS Loganiaceæ. China. 1896. 10 feet. Evergreen climber. Lilac. July and August. Well-ripened cuttings (with a heel of older

BUDDLEIA VARIABILIS, VAR. VEITCHIANA, GROWING AGAINST A WALL

wood) in cool frame in September, planted in sand or sandy loam; water sparsely until well rooted.

A strong-growing species for south-west wall, in a poorish soil. The flowers are produced in dense heads, and the leaves are silvery beneath. Variety Veitchiana has been recently introduced from China by Messrs. James Veitch & Sons; this plant resembles this type, but is more robust, the flower spikes being larger, more densely flowered and more brilliantly coloured, the spikes forming continuous pyramids of bloom; the flowers are bright mauve with an orange yellow centre.

CÆSALPINIA GILLIESI (*Crimson Thread Flower*) Leguminosæ. S. America. 1829. Deciduous shrub. Cream-coloured, with bright red stamens. Summer. Cuttings taken off the plant in a growing state, in sand under a hand-light in heat. *Syn.* Poinciana Gilliesi.

A good wall shrub for warm districts, but the flowers are not borne for some years after planting. The foliage is very pretty, with light, feathery pinnate leaflets.

CALYCANTHUS FLORIDUS (*Carolina All-spice*) Calycanthaceæ. Carolina. 1726. From 6 to 10 feet. Deciduous shrub. Purplish-red. June. Layers in summer; seed sown as soon as ripe, or in a cold frame in spring. *Syns.* C. sterilis; Butneria floridus.

An old-fashioned, very sweetly scented shrub, which may be grown against a wall or as a shrub in the open air in a moist spot; it prefers partial shade.

CALYCANTHUS GLAUCUS (*Smooth-leaved All-spice*) Calycanthaceæ. Pennsylvania. 1806. 6 feet. Deciduous shrub. Lurid purple. May. Layers in summer; seed sown as soon as ripe, or in a cold frame in spring. *Syns.* C. bullatus; C. ferax; C. fertilis; C. lævigatus; C. nanus; Butneria fertilis.

This plant is not so sweetly scented as C. floridus, but may be grown in similar positions.

CALYCANTHUS OCCIDENTALIS (*Western All-spice*) Calycanthaceæ. California. 1831. 9 feet. Deciduous shrub. Maroon. June to October. Layers in summer; seed. *Syn.* C. macrophyllus.

A good shrub for a north wall, which is a great recommendation, as the shrubs suitable for such a position are not very many in number; the flowers are large and very fragrant; like the others of the same genus it prefers a moist spot and partial shade. The blossoms are borne profusely all through the summer.

CALYSTEGIA DAHURICA (*Dahurian Bear-bind*) Convolvulaceæ. Dahuria. 1826. 6 feet. Herbaceous. Rosy-purple. July. Seed in spring; division of roots.

A very showy twiner in summer, useful for covering trellis or hedges, but, like the Convolvulus, it should be planted only in situations where its roots may roam at will without harming other plants, as it is very difficult to eradicate once it has become established. This plant is probably a variety of Calystegia sepium.

CALYSTEGIA HEDERACEA (*Ivy-leaved Bindweed*) Convolvulaceæ. China. 1844. 6 feet. Herbaceous. Rose-coloured double flowers. June. Seed in spring; root division. *Syns.* C. pubescens; Convolvulus pubescens.

A rapid grower, enjoying a light, rich soil and a sunny position.

CALYSTEGIA SYLVATICA (*Wood Bindweed*) Convolvulaceæ. N. Africa. Hungary. 1815. 18 feet. Herbaceous. White. July. Seed; root division. *Syn.* Convolvulus sylvaticus.

CALYSTEGIA SYLVATICA

One of the most vigorous of climbers, with dense foliage and large showy flowers, well suited for the wild garden or for covering any rough objects, but its roots ramble so freely that care must be exercised as to where it should be planted. Variety Incarnata bears very pretty pink flowers.

CANTUA BUXIFOLIA (*Peruvian Magic Tree*) Polemoniaceæ. Peruvian Andes. 1849. 4 feet. Evergreen shrub. Pale red. June. Cuttings in sand under a hand-light. *Syns.* C. dependens; Periphragmos buxifolia.

A rare shrub, which may be grown in warm localities at the foot of a south-west wall; the flowers are trumpet-shaped and are borne in clusters.

CARDIANDRA ALTERNIFOLIA Saxifrageæ. Japan. 1865. 3 feet. Evergreen. White and lilac. July. Cuttings.

A low-growing shrub which should be regarded as being half hardy; it will probably thrive in the southern counties planted against a warm south wall.

CARPENTARIA CALIFORNICA Saxifrageæ. California. 1880. 4 feet. Evergreen shrub. White. June. Tongued layers, with moss and damp sand pressed into the cut, kept moist with the syringe; seed; cuttings (these do not strike readily).

A beautiful shrub with large Anemone-like flowers; it appears to be hardy in the south, but generally does better when grown against a west or south-west wall in good, well-drained, loamy soil. It is well worth while to try and establish this shrub; the flowers are borne very freely and are very showy and fragrant.

CARYOPTERIS MASTACANTHUS (*Moustache Bush*) Verbenaceæ. China. 1844. From 1 to 4 feet. Herbaceous. Violet. Autumn. Seed; root division;

cuttings. *Syns.* Barbus mastacanthus; Mastacanthus sinensis.

A low-growing plant, bearing very pretty blossoms; it should be looked upon as being half hardy, and is well adapted for planting at the base of a wall; keep well supplied with water during the summer. Variety Albus bears white flowers.

CASSIA CORYMBOSA (*Senna*) Leguminosæ. Buenos Ayres. 1796. 12 feet. Evergreen climber. Yellow. Summer. Cuttings of half-ripened shoots in heat.

A climber very seldom met with. In most places it should be treated as being half-hardy, but it will thrive on a south-west wall in warm situations and flowers well. In colder localities, plant out in June and, as soon as the foliage is touched by the frost, pot up, cut back to the old wood, and winter in a cool house.

CEANOTHUS AMERICANUS (*Mountain Sweet—New Jersey Tea Ball*) Rhamnaceæ. N. America. 1713. 5 feet. Deciduous shrub. White. June and July. Cuttings of young wood in sandy soil in a cold frame in the autumn; layers.

One of the hardiest of the tribe, this plant thrives best against a wall in a dry, porous soil; it flowers very freely. The variety Variegatus (*Syn.* C. intermedius) has its leaves bordered with yellow. Prune in April, leaving about three eyes of the preceding year's wood.

CEANOTHUS AZUREUS (*Blue Bush—Blue-flowered Red-Root*) Rhamnaceæ. Mexico. 1818. 10 feet. Deciduous shrub. Pale blue. June to September. Cuttings of the young wood in sandy soil in a cold frame in autumn; layers. *Syns.* C. bicolor; C. cæruleus.

CARPENTARIA CALIFORNICA, GROWING AGAINST A WALL IN SCOTLAND

A very pretty shrub for clothing a wall, flowering profusely all through the summer; it is fairly hardy and likes a light, porous soil. There are many varieties to be obtained, the following being among the best: Gloire de Versailles, Gloire de Plantières, Albert Pittet, Lucie Simon. Prune in April, leaving about three eyes of the preceding year's wood.

CEANOTHUS CUNEATUS (*Warted Blue Bush*) Rhamnaceæ. Upper California. From 4 to 6 feet. Deciduous shrub. Pale blue; sometimes white. April to July. Cuttings of the young wood in sandy soil in a cold frame in autumn; layers. *Syns.* C. macrocarpus; C. verrucosus.

A half-hardy species, requiring a warm locality, it forms a thickly-branched bush and grows freely against a wall; the flowers are produced freely in terminal corymbs. Prune after the frost is over, topping the preceding year's wood.

CEANOTHUS DIVARICATUS (*Straggling Blue Bush*) Rhamnaceæ. California. 1848. From 6 to 10 feet. Deciduous shrub. Bright blue. May to September. Cuttings of the young wood in sandy soil in a cold frame in autumn; layers.

A free-growing species, doing well on a wall; it is quite hardy, and likes a light porous soil. Prune in April, leaving several eyes of the preceding year's wood.

CEANOTHUS INTEGERRIMUS Rhamnaceæ. California. 1846. From 3 to 6 feet. Half hardy. White. June. Cuttings of the young wood in sandy soil in a cold frame in autumn; layers.

This is a white-flowering species with entire leaves. It should be given the protection of a wall.

CEANOTHUS PAPILLOSUS Rhamnaceæ. California. 1848. From 3 to 5 feet. Half-hardy.

Light blue. May and June. Cuttings of the young wood in sandy soil in a cold frame in autumn; layers.

This is only half hardy, and must be given the shelter of a wall with a south aspect. The flowers are borne in dense clusters.

CEANOTHUS VEITCHIANUS (*Veitch's Blue Bush*) Rhamnaceæ. California. 9 feet. Deciduous shrub. Dark-blue. June. Cuttings of the young wood in sandy soil in a cold frame in autumn; layers.

One of the best in the genus, the rich dark-blue flowers are produced in dense clusters at the ends of the branches. Plant in a light, porous soil in a warm situation against a wall; prune after all fear of frost has gone, topping the young wood.

CEDRONELLA CORDATA Labiatæ. United States. 1880. Trailer. Light purple, in spikes. May and June. Division; cuttings of young wood. *Syn.* Dracocephalum cordatum.

A trailing plant, not very often seen in gardens. It is quite hardy and likes a soil composed of sandy loam, leaf mould and peat.

CELASTRUS ARTICULATUS (*Jointed Staff Tree*) Celastrineæ. E. Asia. 1891. 15 feet. Deciduous twining rambler. Green. June. Layers in the autumn. *Syns.* C. orbiculatus; C. Orixa (Hort); C. punctatus.

A useful shrubby climber, well adapted for covering tree stems and for running over mounds, especially by the sea-side. It is a rapid grower and bears shining scarlet fruit in autumn.

CELASTRUS SCANDENS (*Climbing Staff or Spindle Tree*) Celastrineæ. N. America. 1736. 20 feet. Deciduous twiner. Yellow. May. Seed; layers in the autumn. *Syn.* C. bullatus.

CEANOTHUS PAPILLOSUS

A rapid-growing twining plant, excellent for trellis and arbours. The flowers are small and are succeeded by orange-coloured berries.

CENTROSEMA GRANDIFLORA (*Butterfly Pea*) Leguminosæ. Brazil. 1893. Half-hardy climber. Lilac rose. June. Seeds; cuttings of stubby side shoots in heat.

This is a fragrant, perennial climber, bearing very beautiful inverted pea-shaped flowers in profusion, varying in colour from a rosy-violet to a reddish-purple, with a white marking through the centre, the buds are pure white. It must be treated as a half hardy, and sheltered in the greenhouse during the winter.

CERCIDIPHYLLUM JAPONICUM Magnoliaceæ. Japan. From 10 to 12 feet. Half-hardy shrub. Green. July. Seeds; layers.

A rare shrub, sufficiently hardy for warm localities when grown against a south wall. A specimen may be seen in Kew Gardens.

CESTRUM AURANTIACUM (*Orange Cestrum*) Solanaceæ. Guatemala. 1845. 5 feet. Evergreen shrub. Orange-yellow. June to August. Cuttings in August.

A handsome plant for greenhouse walls or pillars, growing well if planted out in any good soil, especially in a mixture of peat and loam. It is doubtful if this plant will survive our winters if planted out of doors in any but the most favoured localities. Pinch back early in the year.

CESTRUM ELEGANS (*Bastard Jasmine—Poison Berry*). Mexico. 1844. 10 feet. Evergreen shrub. Carmine. January. Cuttings after flowering. *Syns.* Habrothamnus elegans; H. purpureus.

This species is best grown in the greenhouse ; it may, however, be looked upon as a half-hardy plant, and placed outside in late spring against a warm wall, but it should be wintered in the greenhouse. The var. Argentea is well worth growing for its prettily variegated leaves, which have a creamy surface, with tinges of rose, and light green blotches.

CESTRUM PARQUI (*Cluster Flower*). Chili. 1787. 7 feet. Evergreen Shrub. Yellowish. June. Cuttings.

This shrub is of a more hardy nature than either of the other two mentioned ; it may be grown in the open with the protection of a wall, and with some covering in the winter. The flowers are very fragrant at night, and are succeeded by small, round, black berries.

CHIMONANTHUS FRAGRANS (*Japanese All Spice—Winter Sweet*) Calycanthaceæ. Japan. 9 feet. Deciduous shrub. Yellow or whitish, purple inside. December. Seed in a hot bed in March; layers in the autumn. *Syns.* Calycanthus præcox ; Meratia præcox.

One of the most fragrant of winter-flowering shrubs, and on this account it deserves a place in every garden. It is best grown against a wall having a south or south-west aspect, in a rich, sandy, peat soil. It should be pruned after flowering by cutting back the lateral young shoots close to the main branch ; the next season's flowers will appear on the new growth. Of the two varieties, Grandiflorus and Parviflorus, the former is the better, the blossoms being much larger.

CHOISYA TERNATA (*Mexican Orange Flower*) Rutaceæ. Mexico. 1825. 6 feet. Evergreen shrub. White. July. Ripened cuttings in sand under a bell-jar in the spring or early summer.

A beautiful shrub, hardy in a great many localities either in the open as a bush, or with the protection of a

CHOISYA TERNATA, GROWING AGAINST A WALL

wall with a south or south-west aspect. Plant in a mixture of loam and peat, adding some leaf mould and sand. This plant will stand a fair amount of pruning.

CISTUS (*Rock Rose*) Cistineæ.

These shrubs, which bear their lovely, short-lived blooms so profusely, seem to be hardy enough to grow in the open as bushes in light, warm soils; in some localities they require winter protection, whilst in a great many places they are apt to be killed in a severe winter. The blooms last but for a single day; this, however, is scarcely noticeable, except for the masses of fallen petals, as there is a perpetual succession of flowers during the early summer months. By taking cuttings and wintering these in a cold frame or greenhouse, these plants may be preserved in any garden, and certainly no garden should be without them. Anyone who has ridden through the hill country in Northern Barbary in April or May will not readily forget the sight of these hills covered with Cistus bushes in full flower. In gardens of the colder counties and in localities where the soil is somewhat heavy and rich these plants may be grown against sunny walls which will give the necessary protection.

CISTUS LADANIFERUS (*Gum Cistus*). Spain. Northern Barbary. 1629. From 5 to 6 feet. Leaves nearly sessile, woolly beneath. Flowers large, white. June. Seed; cuttings in spring, or in autumn under glass in sandy peat. In variety Maculatus each petal has a deep purple blotch at the base.

CISTUS LATIFOLIUS (*Broad-leaved Cistus*). Barbary. 1656. From 3 to 4 feet. Leaves stalked, laurel-shaped, woolly beneath. Flowers large white, with a yellow mark at the base of each petal. May. Seed; cuttings in spring or in autumn under a glass in sandy peat.

CISTUS LAURIFOLIUS (*Laurel-leaved Cistus*). S.W. Europe. 1731. From 4 to 6 feet. Leaves

stalked, laurel-shaped, woolly beneath. Flowers medium-sized, white, with a yellow mark at the base of each petal. June. Seed; cuttings (these are somewhat shy of striking).

One of the hardiest of all the rock roses, it will generally survive a fairly hard winter, especially if it has protection from the north wind.

CISTUS MONTPELIENSIS (*Montpelier's Rock Rose*). S. Europe. 1656. 4 feet. Leaves sessile, woolly on both surfaces. Flowers medium-sized, white. July. Seed; cuttings in spring or in autumn under a glass in sandy peat.

This is a species which is very variable in size. Variety Florentinus bears white flowers with a yellow spot at the base of each petal.

CISTUS VILLOSUS (*Hoary Rock Rose*). S. Europe. 1596. From 3 to 4 feet. Leaves stalked, woolly and hairy. Flowers large, reddish-purple. June. Seed; cuttings in spring or in autumn under a glass in sandy peat. *Syns.* C. incanus; C. undulatus.

CLEMATIS Ranunculaceæ. Before enumerating the different species belonging to this genus, the following classification, taken from Moore and Jackman's *The Clematis as a Garden Flower*, is given as an aid to the horticulturist. The classification is not made on scientific principles, but merely from a gardening point of view. Notes on pruning, position, etc., are added for each class.

A. Flowers Produced on One-year-old Ripened Wood:—

(1) Flowers medium-sized, borne in winter and spring. (Type—*Montana.*)
Flowers large.
(2) Spring flowering. (Type—*Patens.*)
(3) Summer flowering. (Type—*Florida.*)

B. Flowers Produced on the Young, Growing Summer Wood :—

(4) Flowers small, borne in late summer. (Type—*Graveolens.*)
Flowers large, borne in summer and autumn.
(5) Flowers, successional, dispersed. (Type—*Lanuginosa.*)
(6) Flowers, successional, massed. (Type—*Viticella.*)
(7) Flowers, continuous, profusely massed. (Type—*Jackmanni.*)

Types { 1. *Montana.*
2. *Patens.*
3. *Florida.*

The earlier-flowering species and varieties should be planted against a wall in any warm, sheltered spots, otherwise the late frosts may injure the blossoms and young shoots ; the rest may be planted in any position, except north, preferably south-east and south-west, where rapidity of growth is wished for, such as to cover walls, trellis or arbours. Any good garden soil will suit these, but they prefer one that holds the moisture well, it should be well drained, and, if possible, mixed with some chalk or lime, and the plants should have an annual dressing of manure in the spring, in the autumn a mulching of half-rotten manure is strongly recommended.

*Pruning.*—Prune in February or March, after any chance of severe frost has disappeared ; cut away only the weaker, straggling and overcrowded branches. Train in the strong, one-year wood so far as it has been well ripened, beyond which it should be cut away.

Type 4. *Graveolens.*

Plant in any position where a summer screen is required ; the species belonging to this type are deciduous, and climb by means of their leaf stalks; they are well adapted for climbing trees. Give a mulch of half-rotten manure in the winter, and fork this in during March, care being taken not to disturb or break the roots.

*Pruning.* — Thin out superfluous and entangled growths; severe pruning, if necessary, will not do any harm.

Type 5. *Lanuginosa.*

The species and varieties belonging to this type are hardy and tolerably vigorous in growth; they enjoy a liberal cultivation. A really well-enriched soil, either natural or artificial, should be secured to produce full beauty; good drainage is necessary, and plenty of manure; a soil composed of a light yellow loam is probably the best. These plants may be used for almost any position, excepting a north aspect, and may be grown to cover walls, trellis, verandahs or poles, or they may be grown as pyramids, or as specimen plants in pots. Feed annually, and in the winter mulch with good rotten farmyard manure, or cover with fibre.

*Pruning.*—Prune annually to about 1 to 2 feet from the ground, so as to encourage new shoots, and to prevent lankiness and bareness. Many will die back sufficiently, and no pruning will be necessary for these. All unripened extremities and weak or superfluous shoots should be removed in February; train in the successional summer growths so as to encourage a good late crop of blossoms.

Types { 6. *Viticella.*
7. *Jackmanni.*

These classes contain some of the hardiest and noblest of the cultivated kinds of Clematis; they may be used for climbing over poles, rock-work, verandahs, walls, trellis or roots, and some for bedding-out. A well-drained, well-enriched soil should be secured; friable loam is the best; light soils should be mixed with a good proportion of loam, while heavy soils should be made lighter by mixing with some calcareous soil or grit. In all cases trench deeply, and be liberal with manure; mulch in winter, and carefully fork in this rotten manure in February. Plant out any time, in good open weather, between the middle of September and the end of April.

*Pruning.*—Cut back the summer growths about November to within six inches of the ground; for late blooming, cut back at the end of April after growth has commenced.

*Propagation.*

The Clematis is generally increased by grafting on the roots of the common wild C. vitalba, or on good,

healthy roots of some of the other species; the root is split open and the scions tied in with matting; it is then placed in a propagating case in heat and, as soon as it is ready, it should be potted and then grown on in a larger pot and hardened gradually before being planted out.

Layers, if kept moist, will root readily at the covered joints, especially if the bark is slightly scraped before the layer is covered over.

Cuttings from young shoots, of one or more eyes, strike in sandy soil, if placed in a propagating case in some heat.

Seeds kept over from the preceding autumn and stored in a dry place may be sown in spring in light sandy soil in a warm frame.

Principal garden varieties of Clematis:—

*Montana* type.

C. Balearica. Creamy-white, purple spots. January, February.
C. Cirrhosa. White, evergreen. January, February.
C. Montana. White. May.

*Patens* type. (Flower in May and June.)

| | |
|---|---|
| Albert Victor | Dark lavender, pale bar. |
| Aureliana | Porcelain blue, lavender stripe. |
| Edith Jackman | White, mauve flush. |
| Fair Rosamond | Blush-white, faint red bar. |
| Lady Londesborough | Silver-grey, pale bar. |
| Lord Londesborough | Deep mauve, purplish red bar. |
| Lord Napier | Mauve. |
| Maiden's Blush | Blush-white, rosy-lilac base. |
| Miss Bateman | White, red anthers. |
| Miss Crawshay | Solferino-pink. |
| Mrs. G. Jackman | Satiny-white, creamy bar. |
| Mrs. Hewett | Tinted white. |
| Mrs. Quilter | White. |
| Sir Garnet Wolseley | Bluish, bronze dash, plum-red bar. |

| | |
|---|---|
| Standishii | Light mauve purple. |
| Stella | Light violet, reddish plum bar. |
| The Queen | Lavender. |
| Vesta | White, creamy tinge over centre bar. |

*Florida* type. (June and July.)

| | |
|---|---|
| Belle of Woking | Double, silvery grey. |
| Countess of Lovelace | Bluish-lilac (rosette). |
| Duchess of Edinburgh | Double, pure white. |
| Fortunei | Creamy-white, fragrant (rosette). |
| J. Gould Veitch | Lavender-blue (rosette). |
| Lucy Lemoine | White, yellow anthers (rosette). |

*Lanuginosa* type. (July to October.)

| | |
|---|---|
| Alba magna | Pure white, broad sepals. |
| Beauty of Worcester | Bluish-violet, white stamens. |
| Belle Nantaise | Lavender. |
| Blue Gem | Pale blue. |
| Enchantress | Double white, rose centre. |
| Excelsior | Deep mauve. |
| Fairy Queen | Pale flesh, pink bar. |
| Gem | Deep lavender-blue. |
| Gloire de St. Julien | White, yellow stamens. |
| Grand Duchess | Blush-white. |
| Henryi | Creamy-white. |
| Jeanne d'Arc | Greyish-white; large. |
| Lady Caroline Neville | White. Mauve bars. |
| La France | Violet-purple, dark anthers. |
| Lanuginosa | Pale lavender. |
| Lanuginosa candida | Tinted greyish-white, large. |
| Lawsoniana | Rosy-purple, deeper veins. |
| Lilacina florabunda | Pale grey-lilac. |
| Lord Neville | Dark plum. |
| Louis van Houtte | Bluish-purple. |
| Mme. van Houtte | White. |
| Marcel Moser | Mauve-violet, red bar. |

| | |
|---|---|
| Marie Lefebvre | Silvery mauve. |
| Mrs. Bush | Deep lavender. |
| Mrs. Hope | Satiny-mauve, darker bar. |
| Nelly Moser | Light mauve, with bright red bar. |
| Otto Froebel | Greyish-white, large. |
| Princess Beatrice | Silvery-lilac. |
| Princess of Wales | Bluish-mauve. |
| Purpurea elegans | Deep violet-purple. |
| Robert Hanbury | Bluish-lilac, red edge. |
| William Kennett | Deep lavender. |

*Viticella* type.

| | |
|---|---|
| Ascotiensis (June and July) | Azure-blue, large. |
| Kermesina (July to October) | Bright red. |
| Lady Bovill (July to October) | Greyish-blue. |
| Madame Grange (July to October) | Crimson-violet red bar. |
| Ville de Lyon (July to October) | Carmine red. |
| Viticella rubra grandiflora (July to September) | Claret-red. |
| Viticella alba (July to September) | Greyish-white. |

*Jackmanni* type. (July to October.)

| | |
|---|---|
| Alexandra | Pale reddish-violet. |
| Gipsy Queen | Dark velvety-purple. |
| Guiding Star | Purplish, crimson shaded. |
| Jackmanni | Violet-purple. |
| Jackmanni alba | White. |
| Jackmanni rubra | Red. |
| Jackmanni superba | Dark violet-purple. |
| Lady S. de Radcliffe | Mauve, blue shaded. |
| Madame Edouard André | Bright velvety-red. |
| Magnifica | Reddish-purple, red bar |
| Mrs. Cholmondeley | Light blue. |
| Prince of Wales. | Deep puce-purple. |
| Rubella | Rich claret-purple. |
| Snow-white Jackmanni | White. |

| | |
|---|---|
| Star of India | Reddish-plum, red bar. |
| Thomas Moore | Puce-violet. |
| Tunbridgensis | Deep bluish-mauve. |
| Velutina purpurea | Blackish-mulberry. |

*Graveolens* (or *Flammula*) type. (July to October.)

| | |
|---|---|
| Flammula | White, fragrant. |
| Flammula rosea purpurea | Rosy-purple, fragrant. |
| Graveolens | Pale yellow. |
| Paniculata | White, small. |
| Vitalba | White, small. |
| Wilfordi | Pale yellow. |

*Viorna* type. (July to September.)

| | |
|---|---|
| Coccinea | Scarlet. |
| Crispa | Pinkish-white, fragrant. |

*Coccinea* hybrids.

| | |
|---|---|
| Admiration | Deep salmon, violet edge, bell-shape. |
| Countess of Onslow | Violet-purple, scarlet band, bell-shape. |
| Duchess of Albany | Bright pink, deeper in centre, fading at the edges. |
| Duchess of York | Pale blush pink, deeper in the centre, bell-shape. |
| Grace Darling | Bright rosy-carmine, star shape. |
| Sir Trevor Lawrence | Crimson, bell-shape. |

CLEMATIS ÆTHUSIFOLIA. Mongolia. 1861. From 4 to 6 feet. A dwarf, sub-shrubby plant. Flowers campanulate, yellowish-white. August and September. *Syn.* C. nutans, var. Æthusifolia.

A pretty species with small, doubly-pinnate leaves; the var. Latisecta (North China, 1869) differs from the type in having larger leaf segments and in the leaf edges being irregularly toothed; both are quite hardy. (*Graveolens* type.)

CLEMATIS APIIFOLIA (*Celery-leaved Clematis*). Japan. 10 feet. Dull white. August to September. *Syns.* C. japonica ; C. virginiana.

A strong climber, with ternately cleft leaves.

CLEMATIS AZUREA, *vide* C. patens.

CLEMATIS CÆRULEA, *vide* C. patens.

CLEMATIS CALYCINA. Minorca. 1783. 12 feet. Evergreen. Flowers bell-shaped, about 2 inches across, yellowish-white with oblong red spots inside, downy on the outside ; peduncles one-flowered. January to March. *Syn.* C. Balearica (Rich).

A very pretty plant, but it is hardy only in the south and should be planted in sheltered spots or in a cool greenhouse. (*Montana* type.)

CLEMATIS CAMPANIFLORA (*Bell-flowered Clematis*). Portugal. 1810. 12 to 18 feet. Flowers small, bell-shaped, purplish white, fragrant. June and July. *Syns.* C. campanulata ; C. crispa (Hort) ; C. parviflora ; C. revoluta ; C. viornioides.

A slender climber, with bi-ternately, pinnate leaves.

CLEMATIS CIRRHOSA (*Tendrilled Clematis*). S. Europe, N. Africa. 1596. 12 feet. Evergreen. Flowers cream coloured, downy on the outside, smooth within, growing from the leaf fascicles. January and February. *Syns.* C. Balearica (Pers). ; C. pedicillata ; C. polymorpha ; C. semitriloba.

A hardy species, which is able to stand a good deal of frost, but it is sometimes cut down to the ground and should, therefore, be planted in a sheltered corner. (*Montana* type.)

CLEMATIS COCCINEA. Texas. 1868. 5 or 6 feet. Flowers solitary, composed of four fleshy sepals, vermilion outside, yellow within. July to September. *Syn.* C. texensis.

This is a beautiful, scarlet species, which is hardy enough for most warm localities. C. crispa, recently introduced, bears pinkish-white, sweet-scented flowers. (*Viorna* type.)

CLEMATIS CONNATA. Himalaya. 12 feet. Pale yellow. August. *Syns.* C. montana (Hort); C. venosa.

A large, woody, hardy climber, bearing many-flowered panicles; the leaves are pinnate, with somewhat larger leaflets.

CLEMATIS CRISPA (*Curled Clematis*). N. America. 1726. 6 feet. Evergreen. Flowers bell-shaped, nodding and fragrant, pale lilac or purple, peduncles one-flowered, shorter than the leaves; sepals leathery, reflexed with wavy margins, constricted above the middle. June to October. *Syns.* C. cordata; C. cylindrica; C. Shillingii; C. Simsii; C. viorna (Andr.).

A species that blooms freely and is quite hardy. (*Viorna* type.)

CLEMATIS ERIOSTEMON (*Woolly-Stamened Clematis*). N. America. 1852. 3 feet. Flowers bluish-violet, peduncles three-flowered. *Syns.* C. divaricata; C. Hendersoni (of gardens).

The leaves of this species are generally pinnate, the two or three pairs of segments are dark green and oval, the lateral ones being entire, while the terminal ones are irregularly three-lobed.

CLEMATIS FLAMMULA (*Sweet-scented Clematis*). S. Europe. 1596. From 10 to 15 feet. Flowers

CLEMATIS FLAMMULA GROWN AS A PILLAR

small, pure white, fragrant; peduncles either simple or branched. Leaves pinnate, with entire or three-lobed leaflets, varying in form. July to October. Generally grown from seed. *Syn.* C. angustifolia; C. cæspitosa; C. canaliculata; C. fragrans; C. maritima; C. paniculata (Hort).

A somewhat slender climber, which is much grown for its fragrance. It should be planted in a sunny spot, as it is not partial to shade. Several garden varieties are to be obtained. (*Graveolens* type.)

CLEMATIS FLORIDA. Japan. 1776. 10 feet. Flowers large, spreading, white; peduncles one-flowered, longer than the leaves. The leaves are either ternate or bi-ternate, with small ovate, lance-shaped leaflets. April to September. *Syn.* C. Fortunei (Hort).

A rather slender climber, which has been nearly ousted out of cultivation by the more modern varieties and hybrids. (*Florida* type).

CLEMATIS FORTUNEI (*Fortune's Clematis*). Japan. 1863. Flowers white, fragrant, the odour resembling that of orange blossoms; the blooms form large rosettes consisting of stalked creamy-white sepals, having pale-coloured filaments in the centre; these are produced at the ends of the young growths.

The leaves are thick and generally trifoliate, the leaflets being cordate with rounded apices. June and July. Two varieties may be obtained, the one bearing bluish-lilac flowers (variety Countess of Lovelace), the other being of a lavender-blue colour (variety John Gould Veitch, *Syn.* C. Fortunei cærulea). (*Florida* type.)

CLEMATIS GRATA Himalaya. Flowers small, cream and mauve. Summer,

The plant has been recently introduced and is very striking in appearance.

CLEMATIS HAKONENSIS (*Hakon Clematis*). Japan. 1860. Flowers large, violet or violet-purple, spreading. Leaves pinnate with 5 or 7 leaflets, rounded at the base, dark-green, smooth above, hairy beneath. July to October.

The flowers of the type vary from 4 to 6 inches in diameter; they are produced in masses on the summer shoots. The varieties and hybrids of the Jackmanni type differ chiefly in the colouring of the blossoms, and form some of the most beautiful and attractive of all climbers. (*Jackmanni* type.)

CLEMATIS LANUGINOSA (*Woolly Clematis*). China. 1851. Flowers solitary, very large, spreading, composed of 5 or 6 sepals, pale lavender or bluish. The blooms are borne on short lateral summer shoots; the leaves are generally simple, smooth above, hairy beneath. July to October.

This plant is the parent of most of the fine, large-flowering hybrids which are so well known at the present time. The blooms of some of these are sometimes from 8 to 10 inches in diameter, while the beautiful rich colouring is very varied. The productiveness and succession of blooms in the hybrids far exceeds those qualities of C. lanuginosa itself. (*Lanuginosa* type.)

CLEMATIS MONTANA. Nepaul. 1831. 20 feet. Deciduous. Flowers medium size, white, consisting of 4 spreading sepals, each about an inch long; the blooms are borne on the last year's ripened wood. Leaves ternate, smooth; leaflets toothed at the base. May. *Syns.* C. anemonæflora; C. odorata.

A free-growing climber, well adapted for covering walls and trellis, but it needs plenty of room. Variety Grandiflora bears larger flowers. Variety Rubens,

CLEMATIS MONTANA

recently introduced by Messrs. Veitch from Central China, has rosy red flowers and purplish stems and leaf stalks. (*Montana* type.)

CLEMATIS ORIENTALIS. Orient. 1731. From 8 to 12 feet. Deciduous. Flowers erect, solitary, sweet-scented, yellowish-white. Leaves pinnate; leaflets smooth, with three-toothed lobes. August and September. *Syns.* C. graveolens; C. flava; C. Wilfordi.

A very free-growing species, which should be planted in a sheltered position, as it is only half hardy. (*Graveolens* type.)

CLEMATIS PANICULATA. Japan. 1796. Flowers white, fragrant, resembling those of C. flammula; pedicels many flowered. Leaves pinnate, with entire leaflets. August to October. (*Graveolens* type.)

CLEMATIS PATENS (*Blue Clematis*). Japan. 1836. Flowers large, composed of about 6 to 8 spreading sepals, violet with purplish stamens. Leaves ternate; leaflets entire. May and June. *Syns.* C. azurea grandiflora; C. cærulea.

This is the type from which the hybrid spring-flowering Clematises have sprung; the blooms are borne on the old ripened wood. (*Patens* type.)

CLEMATIS PITCHERI (*Pitcher's Clematis*). United States. Flowers bell-shaped, dull purple. Uppermost leaves often simple, others pinnate; leaflets from 3 to 9 in number. July and August. *Syn.* C. coloradensis. (*Viorna* type.)

CLEMATIS RETICULATA (*Net-veined Clematis*). S. United States. 1880. 8 feet. Flowers pendulous, bell-shaped, solitary, dull-greenish and purple;

peduncles long. Upper leaves simple, lower ones pinnate, with 7 to 9 leaflets. June and July.

CLEMATIS VIORNA (*Viorna—Leather Flower*). N. America. 1730. From 10 to 12 feet. Deciduous, woody climbers. Flowers large, drooping, bell-shaped, reddish-purple outside, yellowish-white within; peduncles one-flowered. Leaves smooth, pinnate; leaflets variable. August.

CLEMATIS VIRGINIANA (*Virginian Clematis*). N. America. 1767. From 15 to 20 feet. Deciduous. Flowers small, fragrant, produced in panicles, whitish. Leaves ternate; leaflets cordate. July. *Syns.* C. cordata; C. cordifolia; C. fragrans.

A free-growing, scrambling climber, very much resembling C. vitalba. (*Graveolens* type.)

CLEMATIS VITALBA (*White Vine—Traveller's Joy—Old Man's Beard*). Great Britain, Europe, N. Africa. From 15 to 25 feet. Deciduous. Flowers greenish-white, with an almond-like scent, produced in panicles. Leaves pinnate. Seeds feathery. July to September. *Syns.* C. bannatica; C. taurica.

The only Clematis which is indigenous in this country; it is a well-known rambler in wayside hedges, particularly in chalky districts. This is a useful plant for covering unsightly objects rapidly. (*Graveolens* type.)

CLEMATIS VITICELLA (*Vine Bower*). S. Europe. W. Asia. 1569. 20 feet. Flowers medium size, drooping, bluish-purple or rose-coloured. Leaves entire or ternate. June to September.

This is the parent of many garden varieties, the flowers of which are much bigger than those of the type; the blossoms are borne on the young summer shoots. (*Viticella* type.)

CLERODENDRON FŒTIDUM Verbenaceæ. China. 1820. 5 feet. Wall shrub. Lilac rose. August. Cuttings of side shoots after flowering in bottom heat under a glass. *Syn.* C. Bungei.

This shrub is sufficiently hardy to be grown in the open in warm localities. It will do well in a sheltered spot on a wall; the flowers are produced freely in such a position and last for a long time. Cut back well after flowering.

CLERODENDRON TRICHOTOMUM Verbenaceæ. Japan. 1800. 6 feet. Wall shrub. Red calyx, white corolla. September. Cuttings of side shoots after flowering in bottom heat under a glass; division of roots, cutting the thick, fleshy portions into short lengths, and planting these in light soil in some heat.

A free-growing shrub which is quite hardy, and flowers well when trained against a wall. Cut back well after flowering.

CLIANTHUS DAMPIERI (*Dampier's Glory Pea*) Galegeæ. Australia. 1852. 2 feet. Herbaceous wall shrub. Red with purple blotch. March. Seed in good-sized pots in late summer.

This plant, as well as the allied species, is not very much grown owing to its being so liable to be infested with red spider, but a trial should certainly be given to it. It is hardy in some places, but mostly requires winter protection; there are two good varieties, Germanica and Marginata.

CLIANTHUS PUNICEUS (*Glory Pea—Glory Vine—Parrot's Beak*) Galegeæ. New Zealand. 1832. 3 feet. Half-hardy climber. Scarlet. May. Seed in spring under glass; cuttings in sand with bottom heat.

This plant should certainly be grown much more than it is in warm localities; it grows freely in Ireland. The brightly-coloured flowers, borne in large bunches, are very showy. Train on sticks, low trellis pillars, or against a wall. Plant in loam and leaf mould, and protect from frost in winter.

COBÆA SCANDENS Polemoniaceæ. Mexico. 1792. 20 feet. Half-hardy evergreen climber. Violet blue or greenish-white. May to October. Seed in spring under glass; cuttings in spring from young side shoots in heat in sandy soil.

This rampant climber is best treated, for garden purposes, as an annual; it likes a good rich soil and plenty of water whilst growing. The young plants must be well hardened before being planted out. Variety Aurea marginata, with variegated leaves, must be propagated from cuttings. If this plant is grown in the greenhouse, constant cutting back must be resorted to, otherwise it grows too freely.

COCCULUS CAROLINUS Menispermeæ. N. America. 1759. 10 feet. Evergreen. Greenish-white. June. Cuttings in sand under a bell-glass. *Syns.* Wendlandia populifolia.

A twiner of not much importance, bearing inconspicuous flowers.

COCCULUS LAURIFOLIUS (*Laurel-leaved Coc-culus*) Menispermeæ. Himalayas. 1816. 10 feet. Evergreen. Whitish-green. January. Cuttings in sand under a bell-glass.

A climbing shrub which requires some protection in winter. There is nothing very attractive about it.

COLLETIA CRUCIATA (*Cross-shaped Colletia*) Rhamneæ. Chili. 1824. 4 feet. Half-hardy wall

shrub. White. Cuttings in sand under glass. *Syn.* C. Bictonensis.

A curious spiny plant, best grown in sheltered positions; the stems are armed with flattened spines. Plant in good loam.

COLLETIA SPINOSA (*Spiny Colletia*) Rhamneæ. Chili and Peru. 1823. 10 feet. Half-hardy wall shrub. White. Cuttings in sand under glass. *Syns.* C. armata; C. ferox; C. horrida; C. polyacantha; C. valdiviana.

The spines in this species are awl-shaped: it is an interesting plant to grow, and one which does very well when planted against a wall in all but very cold districts. Probably this is a variety sprung from Colletia cruciata.

COLQUHOUNIA COCCINEA Labiatæ. Nepaul. 1873. Half-hardy evergreen. Scarlet. September. Cuttings in summer. *Syn.* C. tomentosa.

A twining shrub which is useful for covering pillars or the roof of a cool greenhouse. It may be planted out in summer in warm situations. There is a very woolly variety, sometimes named Colquhounia vestita.

CONVOLVULUS ALTHÆOIDES Convolvulaceæ. S. Europe. 1597. 3 feet. Perennial. Pink. June. Seed in spring; cuttings; root division.

This species bears silvery leaves.

CONVOLVULUS MAURITANICUS (*Blue Rock Bindweed*). 2 feet. Mediterranean. Perennial. Blue, with white throat. Summer. Seed in spring; cuttings; root division.

A beauiful little twining plant, well worth cultivating either in the rock garden or in the sunny borders. It is

frequently used for hanging baskets, and is hardy in most places.

CONVOLVULUS SCAMMONIA (*Scammony*). Mediterranean. 1726. Prostrate perennial. Cream or pale red. July. Seed in spring; cuttings; root division.

CONVOLVULUS TRICOLOR (*Dwarf Convolvulus—Striped Bindweed*). S. Europe. 1629. Annual. July to September. Seed may be sown in the open during the autumn, or in a hotbed in February; in the latter case the seedlings must be hardened off and planted out in May. *Syn.* C. minor.

A favourite annual, of which many varieties are known. The typical flowers are blue, yellow and white. Amongst the varieties to be obtained are : variety Albus, entirely white; variety Splendens, purple; variety Striatus, striped violet and white; but there are many others, all of which are worth growing.

CORNUS CAPITATA (*Strawberry Dogwood*) Cornaceæ. Nepaul. 1825. From 10 to 15 feet. Evergreen wall shrub. White. June to October. Seed sown when ripe in cool house; layers in the autumn. *Syn.* Benthamia fragifera.

Hardy in mild districts, and in many places by the sea, this beautiful shrub thrives best against a wall. In Cornwall it does well in the open and sometimes attains a height of 20 feet. The flowers are borne in dense, round heads and are succeeded in the autumn by inedible reddish fruits, about the size of that of the Arbutus.

CORNUS KOUSA (*Kousa Strawberry Tree*) Cornacæ. Japan. 1847. 8 feet. Evergreen wall shrub. Yellowish-red. Spring. Seed; layers in the autumn. *Syn.* Benthamia japonica.

COROKIA COTONEASTER, TRAINED AGAINST A WALL

A Japanese shrub, resembling C. capitata; it may be grown in similar positions.

COROKIA COTONEASTER Cornaceæ. New Zealand. 4 or 5 feet. Half-hardy shrub. Bright yellow, fragrant. May. Cuttings in sand under a glass; layers in autumn.

A bright spring-flowering shrub, which has proved to be hardy in many places. It does well against a warm wall; in cold localities protection should be given in winter.

CORYLOPSIS HIMALAYANA Hamamelideæ. Khasia Mountains, Bhotan. 1879. 20 feet. Deciduous wall shrub. Yellow and white. March. Layers; root cuttings.

A rare, spring-flowering shrub, which requires a sheltered position against a wall. The flowers are borne in racemes.

CORYLOPSIS PAUCIFLORA Hamamelideæ. Japan. 3 feet. Deciduous wall shrub. Pale yellow, fragrant. February. Layers; cuttings.

A somewhat dwarf-growing species, very much resembling C. spicata, but the racemes contain fewer flowers. Plant in a sheltered spot against a wall.

CORYLOPSIS SPICATA Hamamelideæ. Japan. 1864. 4 feet. Deciduous wall shrub. Pale-yellow, fragrant. February. Layers; root cuttings.

A fragrant spring-flowering shrub which should be planted in a sheltered position against a wall, to protect it from the cold winds.

COTONEASTER BUXIFOLIA (*Box-leaved Rose box*) Rosaceæ. Nepaul. 1824. 3 or 4 feet. Evergreen wall shrub. White. Fruit scarlet. April and

May. Seed sown as soon as ripe in some heat, or in the following spring in the open ground; layers or cuttings in the autumn.

This is a somewhat large-flowering species; the leaves are woolly beneath. It does not grow very high, and should be used for training on a low wall.

COTONEASTER HORIZONTALIS Rosaceæ. China. 1879. Deciduous. Rose coloured, succeeded by bright vermilion fruit. May. Seed; layers, cuttings.

A species which grows in a horizontal position; it is very decorative and attractive, and may be used for covering banks and such like places.

COTONEASTER MICROPHYLLA (*Rock spray Rose box*) Rosaceæ. Nepaul. 1824. 4 feet. Evergreen. White. Fruit scarlet. April and May. Seed sown as soon as ripe in some heat, or in the following spring in the open ground; layers or cuttings in the autumn.

A good wall plant, it grows thickly, and quickly covers a bare space. It may be planted on a north-east wall, or in other cold situations.

COTONEASTER SIKKIMENSIS Rosaceæ. Sikkim. 1890. Deciduous wall shrub. White. Fruit coral red. May. Seed; layers; cuttings.

COTONEASTER SIMONSII Rosaceæ. Khasia. 1868. 6 feet. Evergreen. White. Fruit scarlet. April. Seed sown when ripe in heat, or in the open ground in the following spring; layers and cuttings in the autumn.

A good plant for training on a wall.

CRATÆGUS PYRACANTHA LELANDI (*Fiery Thorn*) Rosaceæ. 1888. Evergreen. White, succeeded by orange-scarlet berries. May. Seed; grafts. *Syn.* Pyracanthus Lelandi.

This thorn tree is said to be a valuable plant for covering walls in exposed places; it bears brightly-coloured berries in profusion.

CUCURBITA (*Gourd*) Cucurbitaceæ. Half-hardy annuals; trailers and climbers. Summer. Seed in gentle heat in April; harden and plant out at the end of May.

There are a great number of ornamental gourds in cultivation; they are grown mostly for their curious fruits which are of all shapes and colours; the foliage is also handsome. These plants may be used for covering arches and trellis, for climbing poles and in various other positions. Amongst the principal species and varieties the following are worthy of mention:—

CUCURBITA FICIFOLIA (*Fig-leaved gourd*). Siam. *Syn.* C. melanosperma.

This species has climbing stems and the fruits are like those of the water melon. It should be grown up large trellis or poles.

CUCURBITA MAXIMA (*Giant Gourd Pumpkin*). India. The unfurrowed stalks are the chief characteristic of this species; the leaves are large and broad, whilst the fruits are also big. Varieties. Large yellow (*Mammoth Pumpkin*); Turk's cap (*Turban Pumpkin*); Grand Mogul; Viceroy; Bishop's Hat; Pasha of Egypt, and many others.

CUCURBITA MOSCHATA (*Musk Gourd—Musk melon*). A plant with slightly furrowed stalks and deeply-lobed leaves.

CUCURBITA PEPO. Levant. Under this species may be classed all the varieties with deeply-furrowed stems, deeply-lobed leaves and small fruits. Varieties: Orange gourd; Warted gourd; Custard gourd; Cricket ball; Cherry gourd; Pear gourd; Fig gourd; Bottle gourd and many others.

CYDONIA JAPONICA (*Japanese Quince*) Rosaceæ. Japan. 1815. 8 feet. Deciduous wall shrub. Deep scarlet. April and May. Layers in September, remaining for a year before being taken off; suckers; cuttings. *Syns.* C. lagenaria; C. speciosa; Chænomeles japonica; Malus japonica; Pyrus japonica.

A well-known and, deservedly, a favourite shrub, which thrives in any ordinary soil, either as a bush in the open, or trained against a wall or trellis, or even grown as a hedge; it has the advantage of doing well on a north or east wall. The old crimson form is the one most commonly met with, but there are many shades of colour to be obtained, amongst which may be mentioned: variety Cardinalis, double flowers, richly-coloured crimson; variety Carnea, flesh-coloured; variety Nivalis, pure white; variety Rosea, rosy-pink.

CYDONIA MAULEI (*Maule's Quince*) Rosaceæ. Japan. 1574. From 3 to 4 feet. Deciduous wall shrub. Bright red. April. Seed; layers; suckers; cuttings. *Syns.* Chænomeles alpina; C. Maulei; Pseudochænomeles Maulei; Pyrus Maulei.

This is a much less vigorous species than Cydonia japonica, the branches are more slender and the foliage is smaller. It is quite hardy, and may be used against a low wall in a sheltered position. The flowers are produced very freely, and are succeeded in the autumn by small orange-scarlet fruit, very fragrant but acrid, from which an excellent preserve can be made.

CYNANCHUM ACUTUM (*Montpelier Scammony*) Asclepiadeæ. S. Europe. 1596. From 2 to 12 feet.

DISCARIA SERRATIFOLIA

Herbaceous. White or rose. July. Division of roots in the spring. *Syn.* Symphyoglossum acutum.

A climber very seldom seen; it is quite hardy.

CYNANCHUM ROSEUM (*Pink Scammony*) Asclepiadeæ. Western Asia. 1818. 3 feet. Perennial. Rose. July Division of roots in the spring. *Syn.* Cycoctonum roseum.

A hardy climber, which should be included in every collection of herbaceous plants.

DECUMARIA BARBARA Saxifrageæ. Carolina. 1785. 5 feet. Deciduous twiner. White. June. Cuttings in summer under a hand-light in shade. *Syn.* Decumaria sarmentosa.

A little grown but very ornamental climber, which is quite hardy, it should be planted against a wall or trellis; it clings by means of small rootlets. The flowers are produced in bunches, and resemble those of the Hydrangea; they are very fragrant. Plant in a warm, dry border of good soil.

DIOSCOREA BATATAS (*Chinese Yam*) Dioscoreaceæ. China. From 6 to 9 feet. Herbaceous. White. Summer. Division of the tubers in spring or autumn.

An ornamental-leaved climber, useful for covering trellis. The tubers descend very deep; they may be used for food in the same way as potatoes. In the variety Decaisneana the tubers are not produced at such a great depth.

DIOSCOREA HYBRIDA (*Hybrid Yam*) Dioscoreaceæ. 1883. Deciduous. Greenish-yellow. Summer. Division of the tubers in spring or autumn.

This plant is only half hardy; it is supposed to be a hybrid between Dioscorea Batatas and Tamus communis.

DIOSPYRUS KAKI (*Date Plum—Japanese Persimmon—Kaki*). Ebenaceæ. Japan. 1789. From 12 to 20 feet. Deciduous. Whitish-green. Summer Seed; grafts.

If planted on a south-west wall in warm localities this plant will both flower and fruit; the latter is round, yellow and fleshy. For soil, mix good fibrous loam and sand, adding some lime or chalk rubble; give plenty of water when the fruit has set.

DISCARIA SERRATIFOLIA Rhamneæ. Chili. From 6 to 10 feet. Greenish-white, fragrant. May and June. Cuttings of half-ripened wood in sandy soil in a cool frame; when these have struck, keep them in a close frame until they have become well established. *Syn.* Colletia serratifolia.

A curious spiny plant, which is hardy enough for a warm wall in mild localities. A specimen may be seen in Kew Gardens.

DISCARIA TOUMATOU (*Wild Irishman*) Rhamneæ. New Zealand. 1875. 15 feet. White. June. Cuttings of half-ripened shoots in sandy soil in a cool frame.

An interesting, half-hardy plant for a south wall in warm localities.

DOLICHOS BICONTORTUS Leguminosæ. Japan. 1869. Half-hardy climber. White and purple. Summer. Seed; cuttings.

An unimportant climber of easy culture.

DOLICHOS LABLAB (*Lablab*) Leguminosæ. India. 1776. Purple. July to September. Seed. *Syns.* D. lignosus; D. purpureus; Lablab vulgaris.

An evergreen greenhouse climber; for out of door culture it must be treated as an annual. The flowers are succeeded by bean-shaped pods.

DRIMYS WINTERI (*Winter Bark*) Magnoliaceæ. S. America. 1827. 25 feet. Evergreen wall shrub. White, fragrant. May. Cuttings of half-ripened shoots under a glass in a cold frame. *Syns.* D. chilense; Wintera aromatica.

This shrub, being only half hardy, must be grown against a wall in a sheltered position, and in cold localities winter protection should be given. It will cover a large space, but requires to be kept well cut back. Plant in sandy loam.

ECCREMOCARPUS SCABER (*Bignoniaceæ*). Chili. 1824. From 6 to 10 feet. Evergreen. Orange. Summer. Seed in spring in heat; cuttings in autumn under glass. *Syn.* Calampelis scaber.

A favourite climber with brightly-coloured flowers. It is best treated as a half-hardy annual except in warm localities or very sheltered situations; if it is treated as a perennial it may be advisable to protect the roots during the winter. This plant is suitable for walls, trellis or pillars; variety Roseus bears reddish flowers.

ECHINOCYSTIS LOBATA (*Wild Balsam Apple*) Cucurbitaceæ. N. America. 1895. Prostrate annual. Greenish-white. July to September. Seeds.

This gourd-like plant should be treated as a half-hardy annual, the seeds being sown in a hotbed, and the seedlings gradually hardened before being planted out. The fruit, which is about 2 inches long, is armed with prickles.

ELÆAGNUS (*Oleaster*). These plants are not generally seen growing on walls, but there is no reason why they should not be planted in such a

situation. Some of the species thrive very well under this treatment and look very handsome, both the foliage and the fruit being attractive. The following species may be so grown :—

ELÆAGNUS ARGENTEA (*Silver Oleaster—Wild Olive—Silver Berry—Missouri Silver Tree*) Elæagnaceæ. N. America. 1873. 10 feet. Deciduous wall shrub. Yellow. July and August. Seed ; layers ; cuttings. *Syn.* E. canadensis.

The foliage is silvery-white, the flowers fragrant, and the semi-globular edible fruit is covered with silvery scales.

ELÆAGNUS GLABRA (*Smooth Oleaster—Wild Olive*) Elæagnaceæ. Japan. Deciduous wall shrub. 3 to 6 feet. Whitish. Summer. Seed ; layers ; cuttings.

ELÆAGNUS MACROPHYLLA (*Big-leaved Oleaster*) Elæagnaceæ. Japan. From 6 to 10 feet. Evergreen wall shrub. Greenish-yellow. Autumn. Seed ; layers ; cuttings.

This is a good shrub for training on a west wall ; the large, roundish leaves are silvery beneath and have a tendency to curl up their edges. It grows well in any good garden soil.

ELÆAGNUS MULTIFLORA. Elæagnaceæ. Japan. 1873. 3 feet. Deciduous wall shrub. Orange fruit. Seed ; layers ; cuttings. *Syns.* E. crispa ; E. edulus ; E. longipes ; E. odorata ; E. rotundifolia.

This is one of the best of the Oleasters for garden purposes, and several varieties are to be obtained ; the fruit is juicy and pleasing, the leaves green on the upper surface and silvery-white beneath, while the dark red-brown twigs give a very pretty contrast in colour.

EMBOTHRIUM COCCINEUM (*Fire Bush*) Proteaceæ. S. America. 1851. From 3 to 20 feet. Evergreen wall shrub. Scarlet. May. Cuttings of young shoots or of half-ripened wood in sandy soil under a bell-glass.

This very handsome plant is hardy enough for warm localities in the south of England, and would probably thrive well in Ireland; it is seen chiefly in Cornwall and Devonshire. Robinson, in *The English Flower Garden*, speaks of it as follows: "At Coombe Martin, in South Devon, it grows quite 20 feet high, and is a spectacle of wondrous beauty about the end of April or the beginning of May, when every twig carries a cluster of fiery flowers". Plant in a soil made of fibrous peat, loam and coarse sand.

ENKIANTHUS CAMPANULATUS Ericaceæ. Japan. 1888. 6 feet. Evergreen wall shrub. Red. July. Cuttings of half-ripened wood in sandy soil under a bell-glass in spring. *Syn.* Andromeda campanulata.

This plant is hardy enough, when protected by a wall, for many localities in the south of England and Ireland.

ENKIANTHUS JAPONICUS Ericaceæ. Japan. 1870. 5 feet. Deciduous wall shrub. White. February. Cuttings in spring.

It is doubtful whether this species will thrive in any but the warmest localities. Plant in peat and loam.

ERCILLA VOLUBILIS (*Spike-flowered Ercilla*) Phytolaceæ. Chili. 1840. Evergreen creeper. Purple. Early summer. Cuttings; layers. *Syns.* Apodostachys spicata; Bridgesia volubilis; Galvesia spicata.

A very attractive creeper, but it is very rarely grown; it should do well in dry soils. It is self-clinging, like the Ivy.

ERIOBOTRYA JAPONICA (*Japanese Medlar—Loquat*) Rosaceæ. Japan. 1787. From 10 to 20 feet. Evergreen shrub. White. Autumn. Cuttings of side shoots; grafts on Quince stocks in April. *Syns.* Mespilus japonica; Photinia japonica.

A beautiful shrub to grow against a wall which will protect it in a severe winter. The flowers are borne in pendulous racemes; the fruit, the well-known Loquat, is very seldom produced in the open in this country.

ESCALLONIA EXONIENSIS (*Exeter Escallonia*) Saxifrageæ. Garden origin. 1891. Evergreen wall shrub. Pink and white. July. Cuttings; layers; suckers.

A pretty, hardy shrub, bearing dark-green foliage and a profusion of pendent flowers.

ESCALLONIA FLORIBUNDA (*Gum Box*) Saxifrageæ. New Grenada. 1827. 10 feet. Evergreen wall shrub. White. July. Cuttings of half-ripened wood under a hand-light; layers; suckers. *Syn.* E. montevidensis.

A capital shrub for training on walls, or trellis. It is somewhat tender, and is frequently cut down by a hard frost, but it will probably shoot up again in the spring.

ESCALLONIA ILLINITA (*Varnished Gum Box*) Saxifrageæ. Chili. 1830. 5 feet. Evergreen wall shrub. White. August. Cuttings; layers; suckers.

A nice, white-flowering species.

ESCALLONIA MACRANTHA (*Chilian Gum Box*) Saxifrageæ. Chiloë. 1848. 6 feet. Evergreen wall shrub. Crimson. June. Cuttings; layers; suckers.

This species is one of the best known, its fine flowers and glossy foliage making it very attractive; it thrives

ESCALLONIA EXONIENSIS, (GARDEN ORIGIN)

best near the sea, but should do well almost anywhere with good shelter. The variety Sanguinea has dark-red blossoms.

ESCALLONIA PHILIPPIANA (*Philipp's Gum Box*) Saxifrageæ. Valdivia. 1873. 6 feet. Evergreen wall shrub. White. July. Cuttings; layers; suckers.

Hardier than the other species, this plant may be grown in most places. It has small leaves, and bears a number of large panicles of small flowers.

ESCALLONIA RUBRA (*Red Gum Box*) Saxifrageæ. Chili. 1827. 6 feet. Evergreen wall shrub. Red. July to September. Cuttings; layers; suckers.

The flowers of this species are somewhat paler in colour than those of E. macrantha.

EUCRYPHIA CORDIFOLIA (*Heart-leaved Brush Bush*) Rosaceæ. Chili. 1851. 20 feet. Deciduous wall shrub. White. August. Cuttings in sand under a glass; layers.

A very pretty and somewhat rare shrub, bearing large flowers resembling those of the St. John's Wort (Hypericum). Although not quite so hardy as the next species, it should do well with the protection of a south wall if planted in a mixture of loam and peat.

EUCRYPHIA PINNATIFOLIA (*Brush Bush*) Rosaceæ. Chili. 1850. 10 feet. Deciduous wall shrub. White, spreading. July and August. Layers; cuttings in sand under glass; seed.

A remarkably handsome and somewhat rare shrub, which has proved to be sufficiently hardy to withstand a moderately severe winter. The foliage is like that of

a Rose and the flowers are large and pretty, resembling the blossom of an Hypericum. The growth of this plant is slow, but in time it will cover a large space. It may be planted under a south wall in a light, loamy soil, mixed with a proportion of peat and leaf mould; it likes a sunny spot where the wood can ripen well.

EUONYMUS AMERICANUS (*Burning Bush—Strawberry Bush—Spindle Tree*) Celastrineæ. N. America. 1686. 6 feet. Deciduous wall shrub. Greenish-purple. June. Cuttings in autumn.

The flowers of this plant are succeeded by warted, scarlet fruit, which give it the name of the Burning Bush. It should be planted on the shady side of a wall in a moderately moist spot.

EUONYMUS JAPONICUS (*Japanese Spindle Tree*) Celastrineæ. Japan. 1804. 6 feet. Evergreen wall shrub. White. April. Cuttings in autumn.

This species thrives well by the sea; in colder localities it should be regarded more as a half hardy, but it grows well, when protected by a wall, in most places. There are many varieties, of which the following may be mentioned: Albo-marginatus, with white-margined leaves; Aurea-marginatus, leaves with a yellow edge; Latifolius albus, green and white leaves; Latifolius aureus, green and yellow leaves. Plant against a shady wall.

EUSTREPHUS LATIFOLIUS (*Wombat Berry*) Liliaceæ. New South Wales. 1820. 3 feet. Evergreen twiner. Pale purple. June. Seed in heat; cuttings in sandy peat. *Syns.* E. angustifolia; E. Brownii.

Too tender to withstand our winters, this twiner must be treated as a half hardy, and planted out in the early summer; it does well in a cold greenhouse. Plant in fibrous peat and sand, and do not over-water.

A SPRAY OF FABIANA IMBRICATA

EXOCHORDA GRANDIFLORA (*Pearl Bush*) Rosaceæ. China. 6 feet. Wall shrub. White. May. Seed; layers; cuttings. *Syns.* Amelanchier racemosa; Spiræa grandiflora.

This lovely shrub is generally grown in the open, but if desired, it will do well against a wall; it is one of the best of the Spiræa group.

FABIANA IMBRICATA (*False Heath*) Solanaceæ. Chili. 1838. 3 feet. Evergreen wall shrub. White. May. Cuttings of young shoots in a cold frame, taken in spring.

A heath-like shrub, adapted for a low west wall. It should be protected through the winter in cold places, preferring a peaty soil. The shoots bear a quantity of trumpet-shaped blossoms in the early summer.

FEIJOA SELLOWIANA Myrtaceæ. Brazil. 1898. From 6 to 8 feet. Evergreen wall shrub. Purplish-crimson. Summer. Layers.

A recently introduced shrub bearing a yellowish-green, egg-shaped fruit, resembling the Guava, which is said to possess a delicious, aromatic flavour, and a rich perfume. It is doubtful whether this plant has yet fruited in this country, but it flowers freely, and should have a warm, sunny spot on a wall.

FENDLERA RUPICOLA Saxifrageæ. Texas and Mexico. 1888. From 2 to 4 feet. Deciduous shrub. White, large. Summer. Seed; cuttings; layers.

A shrub which requires wall protection in any but the warmest districts; it is worth growing.

FORSYTHIA SUSPENSA (*Golden Bell*) Oleaceæ. Japan. 12 feet. Deciduous. Yellow. Spring. Leaves

both simple and trifoliate. Layers; cuttings in the summer.

A delightful free-blooming shrub that may be trained up trellis or walls; it likes a sunny position where it can ripen its young wood thoroughly, and it needs but little pruning. The varieties Fortunei and Sieboldi are vigorous forms of the parent.

FORSYTHIA VIRIDISSIMA (*Golden Bell*) Oleaceæ. China. 1845. 10 feet. Deciduous. Yellow. Spring. Layers; cuttings in summer.

A good shrub for trellis or walls, blooming freely in the spring. It differs from F. suspensa in bearing more numerous flowers, the peduncles of which are very short, and in the leaves being all simple. Plant in a very sunny spot, and protect in winter in very cold localities. F. intermedia is a hybrid between this plant and F. suspensa.

FREMONTIA CALIFORNICA (*Slippery Elm*). California. 1851. From 6 to 12 feet. Deciduous wall shrub. Bright yellow. Early summer. Seeds; cuttings in spring under a hand-glass.

A really handsome shrub, which bears its bright yellow flowers, about 2 inches across, more or less all through the summer. It is a fast grower, and thrives in sandy loam, mixed with some leaf mould or peat. Plant against a north or north-west wall.

GARRYA ELLIPTICA Cornaceæ. California. 1828. From 8 to 10 feet. Evergreen wall shrub. Yellow. Spring. Seed; layers; cuttings of half-ripened wood in August in sandy loam in a shady place.

This shrub does very well on a wall or trellis; the flowers are borne in catkin-like racemes, and are very welcome for late winter decoration, as they last well in

water. Prune as soon as the flowering season is over before the new growth begins, shorten the leading shoots, and cut out all worn-out growths altogether.

GORDONIA LASIANTHUS (*Loblolly Bay*) Ternstrœmiaceæ. N. America. 1739. From 8 to 10 feet. Evergreen wall shrub. White. July and August. Seed; layers. *Syn.* G. pyramidalis.

A beautiful, somewhat tender shrub which bears large fragrant white flowers; it is very rarely to be seen in gardens, but it is quite worthy of a place. Plant in a moist place against a warm wall in peat or leaf mould, and sand; protect in winter.

GORDONIA PUBESCENS (*Downy Loblolly Bay*) Ternstrœmiaceæ. N. America. 1774. From 4 to 6 feet. Evergreen wall shrub. White. August. Seed; layers. *Syns.* Lacathea florida; Michauxia sessilis.

This species has not the robust growth of G. lasianthus, and the flowers are somewhat smaller, being about 3 inches across, pure white, with yellow stamens forming a tuft in the centre. Plant in a moist place against a warm wall in peat or leaf mould, and sand; protect in winter.

GRABOWSKIA BOERHAAVIÆFOLIA Solanaceæ. Peru. 1780. 6 feet. Shrub. Pale blue. April. Cuttings; layers; suckers.

A curious spiny shrub, sufficiently hardy to be grown in the open in the southern counties, but elsewhere it must have the protection of a south wall.

GRAMMATOCARPUS VOLUBILIS (*Cup flower*) Loaseæ. Chili. 1827. From 5 to 8 feet. Twining, half-hardy annual. Golden-yellow. August to October. Seed sown in heat in the spring, the seed-

lings being well hardened before being planted out. *Syn.* Scyphanthus elegans.

A very pretty, slender, twining plant, which does well against a wall or on trellis; it is of easy cultivation. The yellow cup-like flowers are borne in abundance, especially if a good supply of liquid farmyard manure is given frequently during growth.

GREVILLEA JUNIPERINA, variety SULPHUREA (*Juniper Grevillea*) Proteaceæ. Australia. 1824. 4 feet. Evergreen wall shrub. Pale yellow. June. Seed in a hotbed; cuttings of young ripened shoots in sand under a glass.

This plant seems to be sufficiently hardy for the southern counties and around London; it may be trained against a warm wall, where it will flower very freely. Plant in peat and loam, mixed with silver sand.

GREVILLEA ROSMARINIFOLIA (*Rosemary Grevillea*) Proteaceæ. Australia. 1824. 4 feet. Wall shrub. Red. June. Seed in a hotbed; cuttings of young ripened shoots in sand under a glass. *Syn.* G. thyrsoides.

A somewhat tender shrub, which may be grown against a warm wall in most of the southern counties.

HABLITZIA TAMNOIDES Chenopodiaceæ. Caucasus. 1828. 8 feet. Deciduous. Greenish-yellow. Late summer and autumn. Division; seed.

This hardy climber is grown for the foliage rather than for the flowers, which have no attraction. It thrives in any good garden soil, and requires plenty of moisture during the summer. It may be trained up stakes, or trellis, or used for covering naked tree stems. The small flowers are borne in clusters in great profusion.

HALESIA CORYMBOSA

HALESIA CORYMBOSA (*Silver Bell—Snowdrop Tree*) Styracaceæ. Japan. 10 to 12 feet. Deciduous wall tree. White, rose or yellow tinted. June. Layers; cuttings of the roots in spring and autumn. *Syn.* Pterostyrax corymbosum.

All the Halesia species might be more grown than they are, the pretty, snowdrop-like, drooping blossoms are very attractive. The one described will thrive well against a wall.

HAMAMELIS ARBOREA (*Witch Hazel*) Hamamelideæ. Japan. 1862. From 15 to 20 feet. Deciduous wall shrub. Primrose-yellow. Autumn and winter. Cuttings of roots; layers; seed (these take two years to germinate).

This shrub is much appreciated for its spider-like flowers, which are produced before the leaves fall in the autumn; it continues to flower throughout the winter. It is quite hardy, and may be grown against a wall; it prefers a somewhat moist, sandy soil.

HAMAMELIS JAPONICA (*Japanese Witch Hazel*) Hamamelideæ. Japan. 1862. 15 feet. Deciduous wall shrub. Lemon-yellow. Autumn and winter. Cuttings of roots; layers.

This species resembles H. arborea in a great many ways, but it is of somewhat dwarfer habit, and the colour of the flowers is paler, it is quite hardy and may be trained against a wall or trellis. It likes a moist, sandy soil.

HAMAMELIS MOLLIS (*Chinese Witch Hazel*) Hamamelideæ. China. 1898. 20 feet. Deciduous wall shrub. Bright yellow. Autumn and winter. Cuttings of roots; layers; seed (germinating in two years).

A recent introduction from China which possesses very distinct foliage; the leaves are 4 or 5 inches long and from 3 to 5 inches broad; they are covered with a mass of stellate hairs beneath, and in the autumn turn a bright orange colour. The flowers are produced very abundantly, and are very useful for winter decoration. Plant either in the open, or against a wall or trellis.

HARDENBERGIA COMPTONIANA (*Sarsaparilla Tree*) Leguminosæ. Australia. 1803. 12 feet. Half-hardy twiner. Evergreen (in the greenhouse). Purple lilac. March. Seed; cuttings of young side shoots in April, under a bell-glass in a warm pit, without bottom heat. *Syns.* H. digitata; H. Huegelii; H. Lindleyi; H. macrophylla; H. makoyana; Glycine Comptoniana; Kennedya macrophylla.

If treated as a half hardy, there is no reason why this twiner should not flourish in very warm situations in the south; it does very well in a cool greenhouse trailing over the rafters. Plant in a mixture of peat and loam, adding a little sand and charcoal.

HEDERA HELIX (*Ivy*) Araliaceæ. Europe. N. Africa, Central Asia. Evergreen climber. Yellowish-green. Autumn. Layers; cuttings either in the open ground or more rapidly by inserting them in some heat in a shady place.

The Ivy is one of the most useful of all our hardy, evergreen, climbing plants, as it can be used for almost any purpose, and it will grow in nearly every kind of soil. It is a good plan to clip off all the old leaves about the end of March, just before the young growth begins; certainly this makes the plant look very bare, but this is only for a short time, and it will have a much tidier appearance afterwards; very often the young shoots have to be nailed up to the support until they cling by themselves with their ærial roots. There are a very large number of varieties, too many to describe in

detail, but amongst the best the following may be mentioned:—

*Algeriensis*, yellowish-green foliage (rapid grower).
*Canariensis*, the Irish ivy, a large-leaved form (rapid grower).
*Conglomerata*, dense foliage, good for rockwork (slow grower).
*Digitata*, black-green foliage, with white veins (rapid).
*Gracilis*, light-green foliage, bronze in autumn (slow).
*Marginata*, dull-green foliage with creamy margin, red striped in autumn (slow).
*Marmorata*, large leaves with creamy-white blotches (rapid).
*Rhombea*, green foliage with creamy margin (slow).
*Sagittæfolia*, arrow-shaped leaves, deep green, bronze in autumn (rapid).
*Variegata*, light green foliage with white margin and white blotches (slow).

HELICHRYSUM ROSMARINIFOLIUS (*Rosemary Everlasting*) Compositæ. Van Diemen's Land. 1827. 8 feet (in its native soil). Half-hardy shrub. White. July. Cuttings of half-ripened wood in summer. *Syn.* Ozothamnus rosmarinifolius.

This is an attractive shrub, which likes a light, loamy soil, and plenty of sun; it seems to be hardy in southern districts, but elsewhere requires the protection of a wall. The branches, when picked with the flowers open, keep very well and make good winter decoration.

HETEROMELES ARBUTIFOLIA (*Californian May Bush*) Rosaceæ. California. 1796. From 10 to 20 feet. Evergreen shrub. White. July. Cuttings of the side shoots; grafts on Quince stocks in April. *Syns.* Cratægus arbutifolia; Mespilus arbutifolia; Photinia arbutifolia.

HIDALGOA WERCKLEI (*Climbing Dahlia*). Costa Rica. 1898. From 10 to 12 feet. Scarlet,

large. Summer. Cuttings rooted during the summer and wintered in the greenhouse serve as stock plants for the spring.

This is a recent introduction, and from all accounts a very attractive one; it resembles the Dahlia, but has a fibrous root and is a climber, supporting itself by clinging leaf stalks; it has the free habit of a Clematis. Its growth is rapid, if planted out early in the summer, and it blooms freely right on into the autumn. It is not sufficiently hardy to withstand our frosts, and should be treated in the same way as Ipomæa versicolor and Cobæa scandens.

HOLBÆLIA LATIFOLIA Berberideæ. Himalayas. 1840. 20 feet. Half-hardy climber. Purplish-green. March. Cuttings of half-ripened shoots in spring. *Syn.* Stauntonia latifolia.

A beautiful evergreen for growing on a wall in warm localities, in a light, somewhat dry soil; in other places it must be treated as a half hardy; keep cuttings, struck if possible in the summer, under glass through the winter, and put the young plants out in the early summer. The foliage is of a deep shining green, and the flowers are very fragrant.

HUMULUS JAPONICUS (*Japanese Hop*) Urticaceæ. Japan. 1885. 6 feet. Perennial. Yellow. Spring. Seed in spring.

This plant is very similar to the Common Hop and may be treated as an annual. There is a variegated variety, Lutescens, whose leaves have a bronze tint. It is a quick grower, and rapidly covers a wall or trellis.

HUMULUS LUPULUS (*Hop—Bine*) Urticaceæ. Europe, Asia, N. America. 15 feet. Greenish-yellow. July. Root division; seed.

A perennial of very easy culture and of very rapid growth; it soon forms a thick screen, and does very

HYDRANGEA PETIOLARIS IN FULL BLOOM

well on a high trellis, or clambering over an arch, or arbour. This plant is very subject to green fly, but syringing will help to get rid of this; if the blight is allowed to increase it soon makes the foliage look very untidy; the variety Aureus has yellow leaves.

HYDRANGEA ALTISSIMA Saxifrageæ. Temperate Himalayas. From 8 to 10 feet. Spreading shrub. White. Summer. Cuttings of young shoots.

A fairly hardy shrub which may be grown against a wall; one growing in this way may be seen in Kew Gardens.

HYDRANGEA PETIOLARIS (*Climbing Hydrangea*) Saxifrageæ. Japan. 1876. 20 feet. Deciduous. White. Summer. Cuttings of half-ripened shoots in sand; division. *Syns.* H. scandens; H. volubilis.

It is doubtful whether this plant will thrive in any but the most favoured districts. It is said by some not to flower very readily in England, but other information states that it bears its white blossoms freely. This plant likes a rich soil, and partial shade: it clings by itself like the Ivy and may be used for covering a naked tree trunk. There is a great resemblance between this plant and Schizophragma hydrangeoides, but the leaves of H. scandens are larger and finely serrated, and the sterile flowers are composed of four bracts, whilst those of S. hydrangeoides are made up of a single bract; the leaves of the latter are smaller, and sharply dentate.

HYMENANTHERA CRASSIFOLIA Violaceæ. New Zealand. 1875. 4 feet. Evergreen. Yellow, succeeded by white berries in the autumn. Cuttings in sand under a bell-glass.

A useful, hardy evergreen for covering low walls.

INDIGOFERA GERARDIANA (*Gerard's Indigo*) Leguminosæ, India. 1842. 3 feet. Pale red.

July. Seed; cuttings of young, half-ripened shoots in summer.

A pretty plant, which will succeed on a south wall in a peaty soil. Prune hard in early winter to ensure plenty of blooms; these are borne in racemes.

IPOMÆA HEDERACEA (*Ivy-leaved Morning Glory*) Convolvulaceæ. N. America. 1597. 10 feet. Hardy annual. Deep blue with red stripes. July to September. Seed in the open ground in April. *Syns.* I. nil; Convolvulus nil.

This is a very pretty, convolvulus-like plant for training up stakes, arches, and such-like situations; it likes a light, rich soil, and is quite hardy. There are many garden varieties, amongst which the following are worthy of mention:—

*Atro-violacea*, dark violet and white.
*Grandiflora*, light blue, big flowers.
*Huberi variegata*, with variegated foliage.
*Superba*, light blue, with a white margin.

IPOMÆA PANDURATA (*Lyre Bindweed—Wild Potato Vine*) Convolvulaceæ. United States. 1776. 10 feet. Hardy perennial. White, with a purplish throat. June. Seed; division of roots. *Syn.* Convolvulus panduratus.

IPOMÆA PURGA (*Jalap*) Convolvulaceæ. Mexico. 1733. 10 feet. Half-hardy perennial. White, red or light pink. August. Tubers; seed.

A tuberous-rooted species, which may be grown in the greenhouse, or treated as a half hardy, the tubers being lifted in the autumn and stored in a warm, dry place until the following spring; it is a pretty creeper.

IPOMÆA PURPUREA (*Morning Glory*) Convolvulaceæ. Tropical America. 1629. 10 feet. Hardy

annual. Purple. June to September. Seed sown in the open ground in the spring. *Syns.* Convolvulus major; C. purpureus.

This is the well-known, large-flowering Convolvulus, of which there are now many varieties of colour to be obtained, including variety Burridgei, crimson; variety Dicksoni, deep blue; variety Tricolor, red, white and blue stripes. It is a very useful, as well as a very ornamental, plant for running over arbours, trellis, shrubs and old roots. Seed may be sown in the open about the end of April or the beginning of May; or the plants may be obtained in a more forward state for planting out early in the summer by sowing the seed in early spring in some heat, the young seedlings must be well hardened off before being put out in May.

IPOMÆA VERSICOLOR Convolvulaceæ. S. Mexico. 1841. 6 feet. Half-hardy annual. Red at first, changing to orange and pale yellow. June. Seed in a hotbed in the spring. *Syn.* Mina lobata.

A very pretty creeper for training along wires and on trellis; the seedlings must be well hardened off before being planted out. A mixture of loam, peat and leaf mould is the best.

JASMINUM HUMILE (*Downy Nepaul Jasmine*) Oleaceæ. N.W. India. 1827. 10 feet. Yellow. Summer. Cuttings. *Syns.* J. chrysanthum; J. pubigerum; J. Wallichianum.

A nearly hardy, evergreen climber, very similar to J. revolutum, but it bears smaller flowers.

JASMINUM NUDIFLORUM (*Winter-flowering Jasmine*) Oleaceæ. China. 1844. From 6 to 10 feet. Deciduous. Bright yellow. December. Cuttings of firm wood.

One of the best known of our winter-flowering plants, bearing a profusion of brightly coloured, fragrant flowers along its leafless stems. It thrives almost anywhere.

JASMINUM ODORATISSIMUM (*Jonquil-scented Jasmine*) Oleaceæ. Madeira. 1656. 3 feet. Evergreen. Yellow. June. Cuttings.

A very fragrant species, but one that is very little grown.

JASMINUM OFFICINALE (*Common Jasmine*) Oleaceæ. India. 1548. 15 feet. Deciduous. White, fragrant. June to September. Cuttings.

This is a very old-fashioned favourite, to be seen covering many walls; it might be grown much more also for climbing up tree stumps, and over trellis. It is very hardy and a rapid grower, and has a most delicate scent; it does not object to hard pruning. There are several varieties, including Affine, with flowers larger than those of the type. Foliis argenteis, with silvery foliage; Foliis aureis, with golden foliage.

JASMINUM PRIMULINUM Oleaceæ. China. 1902. Deciduous. Bright yellow. Cuttings of firm wood.

A recently introduced plant, which Messrs. Veitch report as being quite hardy, and capable of resisting 16 degrees of frost on a north wall. The flowers are larger than those of J. nudiflorum, and are produced contemporary with the leaves.

JASMINUM REVOLUTUM (*Yellow Nepaul Jasmine*) Oleaceæ. E. India. 1812. 12 feet. Evergreen. Bright yellow. June. Cuttings.

This plant has proved to be quite hardy when grown against a sunny wall, except in very cold districts; it is a useful evergreen. It is probably a variety of J. humile.

KERRIA JAPONICA (*Jews' Mallow*) Rosaceæ. Japan. 1700. 6 feet. Deciduous. Orange-yellow.

Summer. Cuttings of young shoots under a hand-glass; root division; layers. *Syn.* Corchorus japonicus.

This is an old favourite, which will grow in most places, and in almost any situation. The single-flowered variety is less commonly seen than the one with double flowers, although it is a more graceful plant. A silvery-leaved form is to be obtained under the name of variety Foliis variegatis.

LAPAGERIA ROSEA Liliaceæ. Chili. 1847. 10 feet. Half hardy. Rose-crimson. Summer and autumn. Seed, newly ripened, sown in a mixture of peat and sand in moderate heat; layers. *Syn.* Capia; Phænocodon.

The Lapageria may be grown outside in warm districts, it is nearly hardy, and can stand a little frost; in winter some protection should be given, or the plant may be moved into a cool greenhouse. This is a beautiful plant for covering a wall or trellis, and it blooms freely for a long period. Grow in peaty loam mixed with sharp sand or charcoal, so as to ensure good drainage, give plenty of water while growing, train in the growths on wires and shade in summer. Variety Alba has pure white blossoms.

LARDIZABALA BITERNATA Berberideæ. Chili. 1848. 20 feet. Evergreen climber. Purple. December. Cuttings of half-ripened shoots in sand under a bell-glass.

This is a handsome plant for covering a bare space on a wall, it is hardy enough for the southern counties, but it is generally grown in a cool greenhouse, as the drooping racemes of flowers are not borne readily in the open. Prune in the autumn by cutting the long shoots back.

LATHYRUS CIRRHOSUS Leguminosæ. Pyrenees. 1870. 1 foot. Annual. Rosy-pink. May and June. Seed in spring.

LATHYRUS GRANDIFLORUS (*Large Everlasting Pea*) Leguminosæ. S. Europe. 1814. 6 feet. Annual. Rose-coloured. June to August. Seed in spring.

This is a very hardy and a very free blooming species; the flowers are generally in pairs. It is a good plant for covering old tree stumps, and likes a sandy soil and plenty of sun.

LATHYRUS NERVOSUS (*Lord Anson's Pea*) Leguminosæ. Straits of Magellan. 1744. From 3 to 5 feet. Perennial. Violet-blue. June to September. Seed; division. *Syns.* L. Armitageanus; L. magellanicus.

This is a beautiful blue pea which should be regarded as being not quite hardy. Plant in light soil under a south wall, and give some protection in winter.

LATHYRUS ODORATUS (*Sweet Pea*) Leguminosæ. Sicily. 1700. 6 feet. Colours various. Fragrant. From June onwards. Seed in spring.

There are so many varieties now of this favourite flower that it is useless to give a list of them, as new shades of colour are introduced every year, and they may be found in any nurseryman's catalogue. A few directions as to culture may be serviceable, as proper treatment will produce a great abundance of blooms. Some prefer to sow the seed in the autumn, and if the young plants survive the winter the results are certainly good, but spring sowing is the more general and will sometimes save disappointment. Two methods may be adopted: the seeds may be sown in February in pots, or boxes in the greenhouse, and the seedlings potted and gradually hardened off for planting out in April, this ensures good, sturdy plants which are not very subject to attacks by birds or slugs; or the seeds may be sown in the open ground from the end of March onwards, according to the weather, and so as to obtain a regular succession. In all cases the ground should be well-

trenched and manured in order to secure the best results, and this should be done some three weeks before the seeds are sown or the seedlings planted out. In dry weather give the plants some weak manure and water occasionally; in order to secure continuous flowering, pick constantly, and clip the heads of the plants; on no account allow them to run to seed, as this means a speedy end to the flowers. When sowing or planting out, allow about three inches between each; do not sow or plant too thickly.

LATHYRUS PUBESCENS (*Downy Everlasting Pea*) Leguminosæ. Chili, 1843; Uruguay, 1892. 3 or 4 feet. Perennial. Purple, blue. May. Seed; division.

This species should have a warm, sheltered corner, with the protection of a wall; it is not suitable for cold districts, but it is a splendid climber for the cool greenhouse.

LATHYRUS ROTUNDIFOLIUS (*Persian Everlasting Pea*) Leguminosæ. Tauria. 1822. 5 feet. Perennial. Ochreous-carmine. May to August. Seed; division. *Syns.* L. Drummondii; L. miniatus; L. peduncularis.

This plant blooms early and very freely, the flowers being borne in large clusters; it makes a capital hedge once it has become established.

LATHYRUS SYLVESTRIS PLATYPHYLLUS (*Everlasting Pea*) Leguminosæ. Europe. From 4 to 6 feet. Rose. July and August. Seed; division. *Syns.* L. angustifolius; L. latifolius.

One of the best-known climbers and trailers, this plant prefers to be left alone to climb and trail at will over tree stumps, bushes, trellis and any rough place; it thrives anywhere. Several different shades of colour have been produced including variety Albus, white; variety Delicatus, white dashed with pink; variety Wag-

neri, dark red; and a very good garden variety known as Pink Beauty.

LATHYRUS TINGITANUS (*Tangier Pea*) Leguminosæ. Morocco. 1680. 4 feet. Annual. Purple and red. June and July. Seed in spring.

LEONOTIS LEONURUS (*Lion's Tail*) Labiatæ. Cape of Good Hope. 1712. From 3 to 6 feet. Evergreen wall shrub. Scarlet. Summer. Cuttings in bottom heat in spring. *Syn.* Phlomis Leonurus.

This plant grows well in some of the warmer districts, and flowers freely on a south-west wall, the blossoms resemble those of the Salvia, and are borne in whorls on a spike; it likes a light rich soil. Shift young plants frequently, and allow plenty of air. If grown in cold districts, this plant should be transferred to a cool greenhouse during the winter.

LEPTOSPERMUM LÆVIGATUM Myrtaceæ. Australia. 20 feet. Half-hardy shrub. White. Summer. Cuttings of young shoots in sand under a glass. *Syn.* Fabricia lævigata.

A half-hardy plant which will probably do well when planted against a south wall. There is a specimen growing against the wall in Kew Gardens.

LESPEDEZA BICOLOR (*Bush Clover*) Leguminosæ. N. China and Japan. 1858. Wall shrub. Rosy-purple. October. Seed; cuttings in spring or summer under a glass. *Syn.* Desmodium penduliflorum.

A graceful, deciduous shrub, which likes peaty loam and leaf mould with good drainage. It is moderately hardy, but thrives best on a wall or trellis; the flowers are borne in long racemes.

HONEYSUCKLE ON A WIRE PORCH

LIPPIA CITRIODORA (*Lemon-scented Verbena*) Verbenaceæ. Chili. 1794. 3 feet. Pale purple. August. Cuttings of young shoots in sandy soil in a warm frame. *Syns.* Aloysia citriodora; Verbena triphylla.

An old favourite which should have a place in every garden. It enjoys a position against a sunny wall, but the roots and branches may require some protection in the winter. The leaves when bruised give a very strong scent of ripe lemons.

LONICERA (*Honeysuckle*).

The twining honeysuckles form a distinct group, and were formerly included in the genus Caprifolium. Most of them have whorled clusters of flowers at the ends of the young shoots. The erect and bushy forms bear pairs of blossoms, coming from the axils, but a few twiners are included among the latter. All the honeysuckles like a light, good soil and a sunny position; they should be allowed to ramble at will over stumps of trees, bushes, hedges and trellis, but must be where the sun can reach them, as they seldom flower in the shade. Robinson, in *The English Flower Garden*, goes so far as to say that "they should not be planted near any living shrub, but should be supported by a dead tree-trunk or trellis, as the honeysuckle gets food enough from the soil". Pruning the old wood after flowering encourages growth. The blossoms come on the young wood which has ripened in the previous year.

LONICERA CAPRIFOLIUM (*Italian* or *Goat-leaved Honeysuckle*) Caprifoliaceæ. Europe. From 12 to 15 feet. Deciduous. Yellowish. May and June. Cuttings in October; layers; seed. *Syns.* Caprifolium hortense; C. italicum.

This species has been naturalised in several parts of England. The flowers are very fragrant.

LONICERA ETRUSCA (*Tuscan Honeysuckle*) Caprifoliaceæ. Italy. 15 feet. Yellow and red. May. Cuttings in the autumn; layers; seed.

This is not so hardy as L. caprifolium, and possesses no great advantages. It is very fragrant.

LONICERA FLAVA (*Yellow Honeysuckle*) Caprifoliaceæ. N. America. 1810. Yellow. June. Cuttings in the autumn; layers; seed. *Syns.* L. Fraseri; Caprifolium flavum.

A strong grower in a warm situation, as against a south wall. It might be planted more generally.

LONICERA JAPONICA (*Japanese Honeysuckle*) Caprifoliaceæ. Japan and China. 1806. From 6 to 15 feet. Red and white. From midsummer to autumn. Cuttings in autumn; layers; seed. *Syn.* L. chinensis.

This is a well-known climber in gardens, and there are many varieties to be obtained; its dark-green leaves vary from the ovate form to the pinnatifid, and the flowers are borne in pairs at the ends of the young shoots. It is a strong grower, and retains its foliage throughout the winter. Variety Aureo reticulata has its leaves netted with gold; it loves a very sunny position, this variety should have a place in every garden. Variety Flexuosa (*Syn.* Brachypoda) is deciduous, and has reddish-white, very fragrant flowers; it is a very good climber for a wall.

LONICERA PERICLYMENUM (*Common Honeysuckle—Woodbine—Bear-bind*). Caprifoliaceæ. Europe. Deciduous. Red and yellow. Summer. Cuttings in autumn; layers; seed. *Syns.* Caprifolium periclymenum; C. sylvaticum.

This is the well-known Honeysuckle of our wayside hedges; many garden varieties have been produced from it.

LONICERA SEMPERVIRENS (*Trumpet Honeysuckle*). Caprifoliaceæ. N. America. 1656. Evergreen. From 8 to 20 feet. Scarlet and yellow. All the summer. Cuttings in autumn; layers; seed. *Syns.* Caprifolium Brownii; C. caroliniana; C. fuchsioides.

This is a robust, evergreen climber with very showy flowers; it is not quite so hardy as the other species, but it flourishes in the southern counties. Sandy peat is the best soil for it to be planted in; it very much dislikes clay and the smoke of towns. This plant makes a capital climber for a cool greenhouse; variety Minor, with smaller flowers, is the commoner.

LYCIUM CHINENSE (*Barbary Box Thorn*) Solanaceæ. N. Asia. 1696. 12 feet. Deciduous climbing shrub. Purple and yellow. May to August. Cuttings or layers in spring and autumn. *Syns.* L. barbarum; L. lanceolatum; L. ovatum.

A free flowering and rapid-growing shrub adapted for trellis, or walls, in any well-drained soil. The flowers are succeeded in the autumn by orange scarlet berries.

LYCIUM HALIMIFOLIUM (*European Box Thorn*) Solanaceæ. S. Europe. 1730. 12 feet. Deciduous climbing shrub. Reddish. May to August. Cuttings or layers in spring and autumn. *Syns.* L. europæum; L. turbinatum; L. vulgare; Jasminoides flaccida.

An old-fashioned shrub frequently seen on cottage walls. It grows in almost any soil and might be used for pergolas, arbours, walls or bare banks. The fruit turns orange-scarlet in the autumn.

MAGNOLIA (*Lily Tree*).

In the colder districts the wall is certainly the best situation for any of the Magnolias, especially for the evergreen sorts, since they flower early and, therefore,

require protection from the cold winds and late frosts. They are all lovers of moisture and dislike a drought; at the same time there should be good drainage; a good, rich, deep soil is the best, but any really good garden soil will do. The spring is the best time of year for transplanting, just as the growth begins, as the fleshy roots send out very few fibres, but they rot very easily when injured, so great care must be exercised; water well immediately after planting; shelter from the wind and sun, and syringe the wood well until the plant is established.

MAGNOLIA CONSPICUA (*The Yulan*) Magnoliaceæ. China. 1789. 25 feet. Deciduous. White, fragrant. April and May. Seed sown as soon as ripe; layers; grafting; budding. *Syns.* M. precia; M. Yulan; Yulania conspicua.

When grown in the open the late frosts are apt to damage the snowy flowers of this species, if it is grown against a wall this is not very often the case; the flowers are very fragrant. There are several varieties and hybrids, of which variety Soulangeana (purple-tinted petals) and variety Lennei (reddish-purple flowers) are worthy of mention; both of these are hybrids between this species and M. obovata.

MAGNOLIA GLAUCA (*Small Laurel-leaved Magnolia—Sweet Bay*) Magnoliaceæ. N. America. 1688. 15 feet. Sub-evergreen. White, fragrant. May to July. Seeds sown as soon as ripe; layers; grafting; budding. *Syns.* M. fragrans; M. longifolia.

This plant takes up less room than M. grandiflora, but resembles it very closely. Its native habitat is a swamp; it will thrive in a moist peaty soil in this country.

MAGNOLIA GRANDIFLORA (*Laurel-leaved Magnolia—Bull Bay*) Magnoliaceæ. N. America. 1737. 30 feet. Evergreen. White, fragrant. Summer. Seeds sown as soon as ripe; layers; grafting; budding. *Syn.* M. fœtida.

MARSDENIA ERECTA

This is a well-known plant on the walls of old houses. It grows to a great size and makes a handsome covering for a tall building. It should be planted on the sunny side, and, after becoming established, requires little looking after, except for tying the shoots back to nails with strips of leather. The flowers are very large and fragrant.

MAGNOLIA OBOVATA Magnoliaceæ. Japan. 1790. 5 feet. Deciduous. Purple outside, white within, fragrant. April and May. Seed; layers; grafting. *Syns.* M. purpurea; Buergeria obovata; Talauma obovata; Yulania japonica.

A pretty, hardy, deciduous shrub, bearing large, sweetly-scented flowers.

MAGNOLIA STELLATA (*Starry Magnolia*) Magnoliaceæ. Japan. 1878. 6 feet. Deciduous. White, fragrant. March to May. Seed; layers; grafting. *Syns.* M. Halleana; Buergeria stellata; Talauma stellata.

A very attractive, dwarf-growing Magnolia, bearing a quantity of star-shaped flowers, before the leaves appear. It is the earliest of all the genus to bloom; variety Rosea has rose-coloured flowers. This plant does well as a bush in the south, and in very sheltered spots, but in the north a wall is probably essential.

MARSDENIA ERECTA Asclepiadeæ. S.E. Europe, Asia Minor. 1597. From 3 to 5 feet. Half-hardy shrub. White, fragrant. July. Cuttings in April or May in sandy soil with bottom heat. *Syn.* Cynanchum erectum.

A sweet-smelling, flowering shrub, with very pretty blue-green foliage, hardy enough when grown against a south wall in mild districts; some protection may be necessary in severe winters.

MAURANDIA BARCLAYANA Scrophularineæ. Mexico. 1825. 10 feet. Deep violet. July. Seed

in early spring in heat; cuttings of shoots in sandy soil in August.

This plant is a very attractive one, and is best treated as an annual, planted so as to grow up trellis, pillars or along wires; the flowers are richly coloured and about 2 inches long. A rich sandy loam is the best soil; harden the seedlings off, and plant out in May or June. Various colours may be obtained, including white (variety Alba), rosy-purple (variety Rosea), deep purple (Atropurpurea).

MAURANDIA ERUBESCENS (*Blush Maurandia*) Scrophularineæ. Jalapa. 1830. 10 feet. Rose. August. Seed in early spring in heat; cuttings of shoots in sandy soil in August. *Syn.* Lophospermum erubescens.

Treat as for a half-hardy annual, and plant in similar situations to M. Barclayana.

MAURANDIA SCANDENS Scrophularineæ. Mexico. 1834. 10 feet. Purple, violet. Summer. Seed in early spring in heat; cuttings of shoots in sandy soil in August. *Syns.* Lophospermum scandens; Usteria scandens.

Treat in a similar manner to M. Barclayana.

MEDICAGO ARBOREA (*Moon Trefoil—Tree Medick*) Leguminosæ. S. Europe. 1596. From 2 to 8 feet. Evergreen. Orange-yellow. May to November. Seed.

This is not a plant of very great value in the garden, but it is said to do well on a sunny wall. The flowers continue to bloom till early winter.

MEDICAGO FALCATA (*Sickle-podded Medick*) Leguminosæ. Great Britain. From 2 to 4 feet. Herbaceous, perennial creeper. Pale yellow. Summer. Seed.

This may be used for covering a rough bank or slope, but it is not a showy plant.

MEGARRHIZA CALIFORNICA (*Californian Big Root—Bitter Root*) Cucurbitaceæ. California. 1880. Green. July. Seed in a slight hotbed in the spring. *Syn.* Echinocystis Californica.

A curious perennial, with an annual trailing stem, and a big tuber for the root, resembling in many respects the Bryony. It thrives in a light soil. The fruit is small and round, covered with short spines like the fruit of a sweet chestnut.

MELALEUCA HYPERICIFOLIA (*Bottle-brush Flower*) Myrtaceæ. Australia. 1792. From 10 to 20 feet. Evergreen. Scarlet. July. Cuttings in May in a compost of peat and leaf mould.

An evergreen shrub, which thrives in Ireland, and other warm localities.

MENISPERMUM CANADENSE (*Canadian Moonseed*) Menispermaceæ. N. America. 1691. 10 feet. Deciduous climber. Yellowish. June. Division ; cuttings in spring ; seed. *Syns.* M. angulatum ; M. smilacinum ; Cissampelos smilacina.

A hardy, rapid-growing climber, not very well-known, it is nevertheless an ornamental plant which thrives well on a damp and shady wall. It may be grown in any ordinary soil and in any position. The leaves are large and round, and the flowers produced in long feathery clusters, while the seeds are borne in moon-shaped pods, which give the common name to the plant.

MIKANIA SCANDENS (*Climbing Hemp-weed—German Ivy*) Compositæ. Brazil. 1823. 6 feet. Perennial twiner. Yellowish-white. Summer. Cut-

tings of half-ripened shoots in sand under a bell-glass in heat. *Syn.* Eupatorium scandens.

A slender twining plant, with ivy-shaped leaves, which is hardy enough to grow in the open on wooden trellis, and such-like places, in summer.

MITRARIA COCCINEA (*Scarlet Mitre pod*) Gesneraceæ. Chili. 1848. 4 feet. Evergreen wall shrub. Scarlet. July. Root division in spring; cuttings in light soil under a bell-glass, in spring or summer. *Syn.* Diplocalyx coccinea.

A very attractive shrub, which should have some protection during the winter, although it is fairly hardy. It bears its scarlet, urn-shaped flowers freely in summer. Plant in fibrous peat, mixed with plenty of sand.

MOMORDICA BALSAMINA (*Balsam Apple*) Cucurbitaceæ. India and Africa. 1568. Half-hardy annual climber. Yellow, with brown spots. June. Seed in hotbed in spring.

A melon-like plant, adapted for trellis, arbours, etc., in a light soil in warm situations. The fruits are roundish and orange-coloured. Give plenty of water during growth.

MOMORDICA CHARANTIA (*Charantia*) Cucurbitaceæ. India and China. 1710. Half-hardy annual climber. Yellow. June. Seed in hotbed in spring. *Syn.* M. muricata.

This is allied to M. balsamina, but is bigger generally. The fruits are oblong, warted and copper-coloured. It may be grown in similar positions.

MUEHLENBECKIA COMPLEXA (*New Zealand Ivy*) Polygoneæ. 1870. Evergreen trailer. Greenish-white. August. Cuttings in cold frame in September.

The beauty of this plant lies in its foliage, borne abundantly on wiry stems, rather than in the flowers, which are small and inconspicuous. It delights in a sunny spot and a well-drained sandy soil, and should be used to cover low trellis, tree stumps, or trained up a wall. The branches are sprays of graceful shape and very valuable for floral decorations. In selecting cuttings, choose the thickest shoots that come from the ground in the form of suckers.

MUTISIA CLEMATIS Compositæ. New Grenada. 1859. From 10 to 15 feet. Herbaceous climber. Scarlet. Summer. Cuttings of half-ripened shoots in spring struck in sand under a bell-glass.

A little-known but most interesting plant, which should grow well on a south wall in warm districts. It is a very fast grower, the flower heads are large and the leaflets have a covering of silky down on the underside.

MUTISIA DECURRENS Compositæ. Chilian Andes. 10 feet. Perennial climber. Orange. June to August. Cuttings of half-ripened shoots in spring, struck in sand under a bell-glass.

This is the most ornamental of the Mutisia genus, but it is very little grown. Once established in a partially shady, airy position, in a moist peaty soil, either against a wall or over bushes, it is a most striking plant, bearing flower-heads nearly 4 inches across. The midrib of the leaf forms a wiry tendril, by means of which it is able to clamber over any object within its reach.

MUTISIA ILICIFOLIA (*Holly-leaved Mutisia*) Compositæ. Chili. 1832. 10 feet. Half-hardy perennial climber. Pale pink. Summer. Cuttings of half-ripened shoots in spring, struck in sand, under a glass with bottom heat.

This species is very much more tender than either M. clematis or M. decurrens; it has been grown in the open

successfully in two or three places, and it will probably succeed in very warm spots, but it is better perhaps for the greenhouse.

MYRTUS COMMUNIS (*Common Myrtle*). Myrtaceæ. S. Europe. 1597. From 6 to 10 feet. Evergreen wall shrub. White. July. Cuttings of half-ripened shoots under a glass, in a little heat.

A favourite plant with sweet-scented leaves and flowers. It requires a wall to protect it from cold winds, and likes a sandy loam mixed with leaf mould; keep well-watered in summer, and syringe frequently. The myrtle is hardy enough for sheltered positions in the southern counties, and the shoots frequently recover after being cut down by frost. Several varieties may be had, any of which are worth growing.

MYRTUS LUMA (*Luma*) Myrtaceæ. Chili. 3 feet. Evergreen wall shrub. Summer. Cuttings under glass. *Syns.* Eugenia apiculata; E. luma.

A good plant for a south-west or west wall; the flowers are very showy and deliciously fragrant.

MYRTUS UGNI (*Fruiting Myrtle*) Myrtaceæ. S. Chili. 1851. 4 feet. Evergreen wall shrub. White. May. Cuttings of half-ripened shoots under a glass, in a little heat. *Syn.* Eugenia Ugni.

A pretty species which bears fragrant red or black berries in late summer. It may be grown in the greenhouse, or in the open in the same positions as M. communis.

NANDINA DOMESTICA (*Nandin*) Berberideæ. China and Japan. 1804. Evergreen wall shrub. White. July. Cuttings of ripened shoots in sand under a hand-light.

A shrub which has pretty, fern-like leaves, and large panicles of small white flowers, which are succeeded by

OSTEOMELES ANTHYLLIDIFOLIA, GROWING AGAINST A WALL

large red berries; it is somewhat tender, but it would probably thrive if grown against a wall in warm localities.

OLEARIA MACRODONTA (*Australian Starwort*) Compositæ. N.S. Wales. 1872. Evergreen wall shrub. Rosy-white. Summer. Seed; cuttings of young shoots in sandy soil under a bell-glass; layers in autumn. *Syn.* O. dentata.

A beautiful flowering shrub, which should be hardy enough if grown on a sheltered wall in warm districts. Many of the more tender Olearias will probably grow in such situations; they are all very free flowering and worth growing.

OLEARIA STELLULATA (*Starry Daisy Tree—Victorian Snowbush*) Compositæ. Tasmania. 1882. From 3 to 5 feet. Evergreen wall shrub. White. June and July. Seed; cuttings of young shoots with a heel, in sandy soil, under a glass in some heat; layers in autumn. *Syns.* O. Gunniana; Eurybia Gunniana.

This species is hardy in the south of England, and might well be tried elsewhere on sheltered walls; it blossoms very freely.

OSMANTHUS FRAGRANS (*Fragrant Olive*) Oleaceæ. Japan and China. 1771. From 6 to 10 feet. Evergreen wall shrub. White. June to August. Cuttings of young ripened shoots; seeds. *Syn.* Olea fragrans.

This is a shrub which bears very fragrant flowers and leaves, the latter are sometimes used for flavouring tea. It thrives excellently on a wall in any but the coldest parts. Variety Japonica rubra has rose-coloured flowers.

OSTEOMELES ANTHYLLIDIFOLIA. E. Asia, Pacific Islands. 1892. From 5 to 8 feet. Evergreen shrub. White. February. Seed; cuttings.

This is a recently-introduced shrub which has pretty pinnate, silvery foliage, and fragrant, white, hawthorn-like flowers in loose clusters. It should have the protection of a wall.

PASSIFLORA CÆRULEA (*Passion Flower*) Passifloreæ. Brazil. 1699. From 10 to 30 feet. Blue. Cuttings of the young wood in summer, in sand under a hand-light; seed sown as soon as ripe.

This is the only species of Passion flower which is hardy enough to withstand our winters; it grows best when trained against a wall, as the heat radiating therefrom helps to ripen the young wood; a south aspect is the best. In the colder districts it may be advisable to collect the shoots together, and wrap some matting round them in winter; the old leaves fall off in the spring when the new foliage is beginning to grow. Plant in peaty loam; prune in February by cutting out weak growths, and shortening strong shoots. Variety Constance Elliott bears white blossoms; it is quite as hardy as the type.

PENTSTEMON CORDIFOLIUS (*Heart-leaved Pentstemon*) Scrophularineæ. California. 1848. 6 feet. Herbaceous shrub. Scarlet. June. Seed in a hotbed; cuttings whenever procurable, under a close frame; division.

This half-hardy shrub is well worth planting in warm districts, but the protection of a wall is recommended. The flowers are very showy.

PERIPLOCA GRÆCA (*Silk Vine—Climbing Dog's Bane*) Asclepiadeæ. Syria. 1597. 10 feet. Deciduous twiner. Green outside, brown within. July. Layers; cuttings under a hand-light in summer or autumn. *Syn.* P. maculatum.

A rapid-growing, decorative plant, very useful for covering a bare space quickly in summer; it may also be trained up walls, trellis or pergolas. The foliage is

dense and pretty, and the flowers are clothed with silky hairs; these are produced very freely, but they have a somewhat disagreeable scent, which makes it advisable not to grow it on the walls of a house near windows.

PHILADELPHUS CORONARIUS (*Syringa—Common Mock Orange*) Saxifrageæ. S. Europe. 1596. 8 feet. Deciduous shrub. White, fragrant. May. Suckers; layers; cuttings of young shoots under a glass. *Syn.* P. triflorus.

The Syringa will flourish very well against a wall. By careful pruning of the shoots immediately after flowering, new growth is encouraged which will bear flowers the following year. Several varieties bearing double flowers may be obtained, the following being amongst the best; var. flore pleno, var. primulæ-florus, var. rosæ-florus.

PHILADELPHUS GORDONIANUS (*Gordon's Syringa*) Saxifrageæ. N.W. America. 1823. 10 feet. Deciduous shrub. White. July. Suckers; layers; cuttings of young shoots under a glass. *Syn.* P. californicus.

This Syringa flowers later than most of the others of the same genus; the blossoms are borne very freely, and are not very strongly scented. It will grow well on a wall.

PHILADELPHUS GRANDIFLORUS (*Large-flowered Syringa*) Saxifrageæ. Carolina. 1811. From 6 to 10 feet. Deciduous shrub. White, fragrant. June. Suckers; layers; cuttings of young shoots under a glass. *Syns.* P. floribundus; P. latifolius; P. speciosus.

A fine shrub with large, very strongly-scented flowers; it thrives very well on a wall. Prune the shoots after flowering is over to encourage new growth.

PIPTANTHUS NEPALENSIS (*Nepaul Laburnum*) Leguminosæ. Temperate Himalayas. 1821. 10 feet. Evergreen shrub. Yellow. May. Seed; cuttings of ripe shoots under a glass; layers; cuttings of roots. *Syns.* Anagyris indica; Baptisia Nepalensis; Thermopsis Nepalensis.

This is a handsome shrub which thrives best in a rich sandy loam; excepting in warm places, it should have the protection of a wall, which it will cover with large, dark-green leaves. Variety Aureus has the bark striped with yellow and green.

PITTOSPORUM TOBIRA Pittosporeæ. Japan. 1804. 12 feet. Evergreen shrub. White, fragrant. May to August. Cuttings of half-ripened shoots in sand under a glass, kept shaded until well rooted.

This half-hardy shrub will grow in most gardens with the protection of a wall. The flowers are deliciously scented.

PITTOSPORUM UNDULATUM Pittosporeæ. Australia. 1789. 10 feet. Evergreen shrub. Greenish-yellow, fragrant. February to June. Cuttings of half-ripened shoots in sand under a glass, kept shaded until well rooted.

This plant may be grown in similar situations as P. tobira.

PLAGIANTHUS BETULINUS (*Cotton Tree—Otago Ribbon Tree*) Malvaceæ. New Zealand. 1870. Over 40 feet in its native soil. Wall shrub. White. Summer. Cuttings; seed.

A shrub bearing ornamental foliage. It seems to be hardy when planted against a sunny wall in a mixture of loam, leaf mould and sand.

POLYGONUM BALDSCHUANICUM (*Turkestan Knotwort*) Polygonaceæ. Bokhara. 1888. 20 feet.

POLYGONUM BALDSCHUANICUM, GROWN ON A PILLAR

Perennial climber. Rosy white. September. Graft upon cuttings of its own roots, or on the roots of another species; seed; root division.

A very valuable climber of comparatively recent introduction. This is one of the most beautiful of the Knotworts; it is seen to most advantage when allowed to ramble over a low fence in the wild garden, but it may also be used for pergolas, arches, or pillars. The flowers are borne profusely in the autumn; a hard frost in winter may cut it down, but it will not permanently injure the plant.

POLYGONUM CILINODE (*Down Knotwort*) Polygonaceæ. N. America. 6 feet. Herbaceous climber. White. September. Seed; root division.

This is a very vigorous climber, useful for covering naked tree-stems and bushes, and it has the advantage of liking shady situations.

POLYGONUM MULTIFLORUM (*Arbour Knotwort—David's Harp*) Polygonaceæ. China and Japan. 1881. 10 feet. Perennial climber. White. July. Seed; root division.

A vigorous grower, adapted for climbing or trailing over root stumps. Its stems are red, and it has a tuberous root.

PRUNUS DAVIDIANA (*David's Peach*) Rosaceæ. China. 1872. From 10 to 20 feet. Deciduous wall tree. Light rose or pink. Early spring. Seed; budding; grafting. *Syns.* Persica Davidiana; Amygdalus Davidiana; Armeniaca Davidiana.

This is one of the earliest of the spring-flowering shrubs. It bears a profusion of blossoms, which requlre the protection of a wall, as frosts are apt to damage them.

PRUNUS DIVARICATA ATROPURPUREA (*Copper Plum*) Rosaceæ. Persia. 1881. 15 feet.

Deciduous wall tree. White and blush. April and May. Seed; budding; grafting. *Syns.* P. pissardii; P. cerasifera atropurpurea.

This plant is well known now in gardens; it is generally planted out in the open, but there is no reason why it should not be trained against a wall or trellis. The black glossy twigs bear a number of white or blush flowers in early spring, succeeded by the handsome, copper-beech coloured foliage, of dark purple hue, which serves as a striking contrast to the greens of neighbouring plants. It bears small and very juicy, reddish-purple plums, but not very abundantly.

PRUNUS TRILOBA (*Three-lobed Plum*) Rosaceæ. China. 1857. 10 feet. Deciduous wall shrub. Pink. April. Seed; budding; grafting. *Syns.* P. virgata; Armeniaca triloba; Amygdalopsis Lindleyi; Prunopsis Lindleyi.

A handsome, early-flowering shrub, which is quite hardy and a free grower, well fitted for covering a wall. Its graceful shoots bear a profusion of semi-double, pink flowers in spring. This species flourishes very well in the open, but much better when grown against a sunny wall. The shoots ripen well in such a position, and afford a greater wealth of flowers.

PUERARIA THUNBERGIANA Leguminosæ. China and Japan. 1889. Perennial climber. Violet, yellow spot on the upper petal. July and August. Cuttings of half-ripened shoots in sand under a glass. *Syns.* Dolichos hirsutus; D. japonicus; Pachyrhizus Thunbergiana.

This is a very strong-growing climber, which will probably prove to be hardy in warm localities. In the first year of planting it frequently dies down to the base. Plant in sandy peat and fibrous loam, and protect in winter till it is well established.

PUNICA GRANATUM (*Pomegranate—Carthaginian Apple*) Lythrariæ. S. Europe, N.W. India.

PRUNUS TRILOBA, GROWN AGAINST A WALL, IN FULL BLOOM

1548. 20 feet. Deciduous wall tree. Red. June to September. Cuttings of shoots and of roots; seed; layers; grafts.

This is a handsome tree that thrives well when planted against a south or west wall, the protection and warmth of which will enable it to ripen its wood better, and hence to flower better than it would otherwise do. It will not fruit in this country. The pomegranate likes a light, rich, loamy soil, to which some leaf mould and road scrapings may be added with advantage. Several varieties are to be obtained. Amongst the best the following may be mentioned:—

Variety *Flore pleno*, with double-white flowers, with a yellow calyx.

Variety *Nana* (S. America), a dwarf form growing about 5 or 6 feet high, with red flowers.

RAPHIOLEPIS INDICA (*East Indian Hawthorn*) Rosaceæ. China. 1806. 4 feet. Evergreen shrub. White or pink. June. Ripened cuttings in sand under a glass. *Syn.* Rhaphiolepis indica.

A shrub which is not hardy enough to stand a severe winter. It should therefore be grown on a south wall, and be protected with matting during the winter. Plant in sandy loam and peat. Three varieties are to be obtained:—

Variety *Phæostemon* (1820), white flowers with brown filaments.

Variety *Rubra* (1806), reddish flowers. *Syn.* R. rubra.

Variety *Salicifolia*, white flowers and willow-shaped foliage. *Syn.* R. salicifolia.

RAPHIOLEPIS JAPONICA (*Indian Hawthorn*) Rosaceæ. Japan. 1865. Evergreen shrub. White. June. Ripened cuttings in sand under a glass. *Syn.* Rhaphiolepis japonica.

Though hardier than R. indica this plant is best grown with the protection of a wall, and in severe weather it requires even more protection. The flowers

are fragrant, and are borne in terminal clusters; they are succeeded in the autumn by black berries. Plant in sandy loam and peat.

RHODOCHITON VOLUBILIS. Scrophularineæ. Mexico. 1833. 10 feet. Half-hardy climber. Red calyx; dark crimson corolla. June. Seed sown in heat in the spring; cuttings in late summer under a hand-light. *Syns.* Lophospermum atrosanguineum; L. rhodochiton.

A very showy, half-hardy plant. Put out strong young plants in May, in good loamy soil mixed with leaf mould and sand. This climber does very well for festooning an arbour or trellis in a warm situation.

RHUS TOXICODENDRON (*Poison Ivy—Poison Oak—Poison Sumach—Poison Vine*) Anacardieæ. N. America. 1640. Climbing shrub. Greenish-yellow. June. Cuttings; layers. *Syns.* R. ambigua; R. diversifolia japonica; Ampelopsis Hoggi.

This is a dangerous plant to grow in the garden, as the shoots, when broken, exude a poisonous sap which has a very bad effect on some people, although others are able to handle it without any discomfort arising. The shrub clambers over rocks and up trees by means of small rootlets. Variety Radicans (*Syn.* R. radicans) has rooting stems, but is not a climber.

RHUS VENENATA (*Poison Elder—Swamp Sumach—Dogwood*) Anacardieæ. N. America. 1713. From 6 to 18 feet. Trailer. Green. July. Cuttings; layers; division. *Syns.* R. vernix; Toxicodendron pinnatum.

A very poisonous plant which it is as well to keep out of the garden. When bruised a poisonous sap exudes which causes a stinging sensation if it comes in contact with the skin and considerable swelling and inflammation may result.

RIBES SPECIOSUM (*Fuchsia Currant—Fuchsia Gooseberry*) Saxifrageæ. California. 1829. From 6 to 8 feet. Deciduous shrub. Crimson. May. Cuttings of ripened shoots in spring or autumn. *Syn.* R. fuchsioides; R. stamineum; Robsonia speciosa.

Although quite hardy enough to need no protection, this plant does better when planted against a wall, and the Fuchsia-like flowers show up well. The latter are produced very freely and have long projecting stamens; the fruit is red.

ROSMARINUS OFFICINALIS (*Rosemary*) Labiatæ. Mediterranean. 1848. From 2 to 4 feet. Evergreen. White or pale lilac. February. Seed; layers in summer; cuttings in spring.

This is an old favourite, which, for its fragrance, may well find a home on a low sunny wall. It thrives best in a poor light soil, mixed with some old mortar. There are several forms with variegated foliage.

ROSA ALPINA. Europe. 1683.

The Boursault roses have originated from this species. They are a free-growing class, but there is not very much to be said in their favour, since latterly so many better climbing roses have been raised. They may be recognised by their smooth reddish stems, the mature ones being free from prickles.

*Pruning*.—Prune in February, cutting out dead wood. They require no thinning. Shorten the long lateral shoots, leaving the shorter ones as they are.

Best varieties:—

*Amadis*. 1829. Semi-double. Purplish-crimson.
*Gracilis*. 1796. Semi-double. Bright pink.
*Inermis Morletti*. 1883. Semi-double. Light rose.

ROSA ARVENSIS (variety) *Syns*. R. repens; Ayrshire rose.

These roses are of native origin, being found in most parts of Europe. They grow very rapidly, and are of

great value for covering rough buildings, summer-houses, ugly fences and such like places in a short time. They should not be used for walls, since they are more effective when allowed to ramble as they please, and they require little pruning or training. When they have grown too rampant they may be trimmed in spring with the garden shears, which method, judging from experience, is productive of a great profuseness of bloom. These roses are very hardy, and will grow nearly anywhere.

*Pruning.*—In February remove all dead wood and thin slightly.

Best varieties:—

*Bennett's Seedling.* (*Syn.* Thoresbyana.) 1840. Semi-double. White.

*Dundee Rambler.* Semi-double. White, pink edges.

*Ruga.* Semi-double. Pale flesh.

*Splendens.* (*Syn.* Myrrh-scented.) White, flesh-tinted.

ROSA BANKSIÆ (*Banksia Rose*). China. 1809. 20 feet.

This is a distinct species, named after Lady Banks. It grows very strongly, but cannot be regarded as being perfectly hardy in all parts of the country. On a warm, south wall and a dry border it generally succeeds very well, but even then it may be killed by a very hard frost. The flowers are small, being produced in clusters very profusely in June, and the leaflets are generally three in number. In mild winters it is evergreen. The plant usually takes three years or so to become well established but it is certainly well worth having a warm corner reserved for it.

The yellow variety (variety Lutea, 1824) bears a large number of scentless flowers, while the white form (variety Alba, 1807) has fewer blooms but these are deliciously fragrant.

*Pruning.*—Prune in April. In the case of old, somewhat worn-out plants, it is sometimes best to cut these back so as to restore vigour. Do not prune at all for the first three years, as the flowers are borne on short flower stems coming from the lateral branches in the third year.

ROSA BOURBONIANA (*Bourbon Rose*). This was introduced from the Isle of Bourbon about 1825. The varieties of it are sweet-scented and good autumnal bloomers. They are useful for growing up pillars, but are somewhat capricious. This rose is probably a cross between R. gallica and R. indica.

*Pruning*.—Thin well, but prune lightly, leaving a good deal of the older wood.

Best varieties:—

*Armosa* (*syn.* Hermosa). 1840. Globular. Pink.

*Mme. Isaac Pereire*. 1880. Globular, imbricated. Light carmine.

*Mrs. Paul*. 1891. Imbricated. Blush-white, shaded pink.

*Setina*. 1879. Globular. Pink.

*Souvenir de la Malmaison*. 1843. Flat. Blush-white, shaded flesh.

ROSA BRACTEATA (*Macartney Rose*). China. 1795. 8 feet.

This plant was introduced into this country by Lord Macartney. It is a vigorous grower, with bright shining foliage, and large single flowers, with golden stamens. It is somewhat tender, and should be planted in a warm, dry situation against a south wall.

ROSA FORTUNEI (*Fortune's Yellow*). China. 1846.

This is a rambling shrub, sprung partly from R. moschata. It may be grown on a warm wall, or else allowed to straggle over some other shrub that will assist in protecting it from the late May frosts. When it can be made to thrive, which is not the case in all gardens, it bears a quantity of beautiful, loose, coppery-coloured blooms, shading into the most delicate pinks and yellows. A trellis is not a very good position for this rose, as the wind, blowing through the spaces, causes it to shed its leaves, and the lower part of the tree then shows nothing but bare stems. In the colder

districts it does better under glass. This rose is usually classed as a Noisette.

*Pruning.*—Cut away any unsound wood in March. Keep all well-ripened laterals.

ROSA INDICA (*China, Blush* or *Monthly Rose*). Asia. 1789. From 4 to 20 feet.

The first and, very often, the last to bloom, this class of rose has for long been a favourite. Of all the roses they may claim to be the most perpetual. The best variety for climbing purposes is Cramoisie Supérieure, which will grow freely for about 20 feet, and bears a profusion of crimson blooms. There are many roses grown now which have sprung from R. indica as one of the parents. They do best when grown on their own roots, and when they are planted in a warm soil.

*Pruning*—Thin out in March.

ROSA INDICA HYBRIDA.

(1) HYBRID CHINA. Prune early in March, leaving the shoots some 5 feet in length. Shorten the laterals on the three-year-old wood to three or four eyes. These roses make good bushy pillars.

Best varieties :—

*Blairii No.* 2. 1845. Cupped. Blush, with rose centre.
*Charles Lawson.* 1853. Open cupped. Rose.
*Coupe d'Hébé.* 1840. Cupped. Dark pink.
*Fulgens.* Cupped. Bright crimson.
*The Garland.* Semi-double. Blush, changing to white.

(2) HYBRID BOURBON. Prune in March, leaving a good many of the two and three-year-old shoots with their laterals moderately long, as well as the best of the young base shoots. These are good pillar roses.

Best varieties :—

*Dawn.* 1898. Semi-double. Silvery-pink, rose-shaded.

A PERGOLA AND ROCK GARDEN IN SWEDEN

*Gloire des Rosomanes.* 1825. Semi-double. Scarlet-crimson.
*Mme. Plantier.* 1835. Flat. Pure white.
*Purity.* 1898. Pointed globular. Pure white, flesh centre.

(3) HYBRID MUSK. Cut out some of the older wood in March, and tie in vigorous shoots.
*Mme. d'Arblay* is cupped. The colour is flesh, changing to white. It is a good pillar rose.

ROSA INDICA ODORATA. Under this title are included the Noisette and Tea roses.

NOISETTE. The type originated in America, and was introduced by Mons. Noisette into France in 1820. It is supposed to have resulted from an accidental cross between R. moschata and a China rose. The hybrids bloom well, bearing clusters of flowers. They are free growers and fragrant. They may be used for walls, trellis or pillars.

*Pruning.*—Prune in March, cutting away some of the unsound wood, but leaving most of the healthy old wood on which the flowers are produced.

Best varieties :—
*Adelina Viviand Morel.* 1891. Globular bud. Pale-yellow, apricot-tinted. (Requires a warm wall.)
*Aimée Vibert.* 1828. Open, rosette centre. Pure white. (Nearly evergreen.)
*Alister Stella Gray.* 1894. Pointed bud. Pale yellow, centre deeper.
*Céline Forestier.* 1858. Open cupped. Pale yellow, centre deeper.
*Lamarque.* 1830. Globular. Pure white, lemon-shaded.
*Marechal Niel.* 1864. Globular. Deep, bright golden-yellow. (Requires a warm wall.)
*Ophirie.* 1841. Globular. Nankeen and copper.
*Rêve d'Or.* 1869. Pointed globular. Buff-yellow. (Nearly evergreen.)

*William Allen Richardson.* 1878. Pointed bud. Deep orange-yellow, white edge.

TEA.

*Pruning.*—These roses require very little pruning. Merely thin out the dead wood, and as many of the shoots which are more than two years old as are required to prevent overcrowding. This may be done as soon as the plants have finished flowering in the summer.

Best varieties :—

*Belle Lyonnaise.* 1869. Cupped, globular. Deep lemon.

*Billiard et Barré.* 1899. Globular. Deep golden-yellow.

*Bouquet d'Or.* 1872. Cupped. Dark yellow.

*Climbing Mrs. W. J. Grant* (*Syn.* Belle Siebrecht). 1899. Globular. Bright rosy-pink.

*Dr. Rouges* (hybrid). 1894. Semi-double. Red, orange centre.

*E. Veyrat Hermanos.* 1895. Semi-globular. Coppery-yellow, rose-shaded.

*François Crousse* (hybrid). 1900. Globular. Bright crimson.

*Gloire de Dijon.* 1853. Flat. Buff or salmon-yellow.

*Henriette de Beauvau.* 1887. Globular, reflexed. Bright yellow.

*Mme. Bérard.* 1899. Pointed bud. Pale flesh, violet-tinted.

*Mme. Eugene Verdier.* 1882. Globular. Golden-yellow.

*Mme. Pierre Cochet.* 1891. Pointed bud. Dark orange-yellow.

*Souvenir de Mme. Viennot.* Globular. Jonquil yellow, shading to China rose.

*Tea Rambler* (hybrid). 1902. Coppery-pink, changing to salmon-pink.

ROSA INDICA ODORATA HYBRIDA. These comprise the Hybrid Noisette and the Hybrid Tea roses.

*Pruning*.—These roses require little pruning. Cut out the dead wood, and thin out some of the older wood to prevent overcrowding. Tie in some of the strong growing shoots, where required to fill in empty spaces.

Best varieties :—

HYBRID NOISETTE.

*Mme. Alfred Carriere*. 1879. Globular. White, yellowish base.

HYBRID TEAS.

*Ards Rover*. 1894. Globular. Dark crimson.
*Bardou Job*. 1887. Nearly single. Glowing crimson.
*Cheshunt Hybrid*. 1873. Globular. Cherry-carmine, violet-shaded.
*Grüss an Teplitz*. 1897. Pointed bud. Bright crimson.
*Longworth Rambler*. 1880. Semi-double. Light crimson.
*Monsieur Désir*. 1889. Globular, reflexed. Crimson, violet-shaded.
*Reine Marie Henriette*. 1878. Pointed. Cherry-carmine.
*Reine Olga de Wurtemberg*. 1881. Semi-double. Bright crimson.
*Waltham Climber*, No. 3. 1885. Imbricated. Dark crimson.

ROSA LÆVIGATA (*Cherokee Rose*). China. 1759. *Syns*. R. camelliæfolia ; R. sinica.

This is an evergreen rose with shining leaves and large white flowers. The branches are armed with stout, curved prickles. It is best grown on a south wall, but it also makes a good pillar rose in the southern counties. No pruning is required except the removal of all dead wood.

ROSA MACROPHYLLA. China and Temperate Himalayas. 6 feet. June.

A handsome pillar rose, bearing large pink flowers.

ROSA MOSCHATA, variety Himalaica. *Syn.* R. Brunonii. Himalayan Briar.

A tall grower, which should be allowed to ramble over arches and summer-houses. Cut away dead wood.

ROSA MULTIFLORA, variety Scandens (*Syn.* R. polyantha). China and Japan. 1822. 12 feet.

This class now contains many varieties, including the well-known Ramblers. The flowers are either single or semi-double. Most of them are rampant growers and are much used for covering buildings, arches, pergolas, etc. One of the best known is the Crimson Rambler, of Japanese origin, which was introduced by Chas. Turner in 1893. This variety, as well as some others of its kind, instead of growing away from the ends of the last year's shoots, sends up strong shoots from the base. It thrives best when planted against wooden supports, and does not care very much about a wall.

*Pruning.*—Prune in March by thinning well, leaving the laterals and new shoots. Shorten some of the one-year shoots so as to clothe the base. Claire Jacquier requires no thinning. Cut away all dead wood and shorten the long laterals. The Lion should not be thinned. Leave a good many of the two and three-year old shoots with their laterals moderately long. Aglaia requires very little pruning. It does not flower till the third year on the sub-laterals. Crimson Rambler and others of its kind, like to have some of the older wood cut away to make room for the younger shoots. Shorten the last year's shoots and leave the laterals with from four to six eyes. Remove all weak wood.

Best varieties :—

*Aglaia.* 1896. Semi-double. Pale-yellow.
*Claire Jacquier.* 1888. Pointed bud. Nankeen-yellow.
*Dawson,* 1898. Semi-double. Pale rose.
*Eleanor Berkeley.* 1899. Double. Pale pink.
*Electra.* 1900. Semi-double. Pale-yellow.
*Euphrosyne.* 1896. Semi-double. Pink.
*Grandiflora.* Semi-double. Pure white.
*Queen Alexandra.* 1901. Semi-double. Rosy-pink.
*The Lion.* 1900. Single. Rich crimson.

THE RAMBLERS.

*Blush Rambler*. 1903. Semi double. Blush-coloured.
*Crimson Rambler*. 1893. Rosette. Bright crimson.
*Hélène*. 1899. Rosette. Mauve, yellow base.
*Leuchstern*. 1899. Single. Bright rose.
*Mrs. F. W. Flight*. 1905. Double. Bright pink.
*Rubin*. 1900. Rosette. Deep crimson.
*Wallflower*. 1901. Rosette. Rosy-crimson
*Waltham Rambler*. 1902. Rosette. Pale rosy-pink, fading to creamy-white.

ROSA SEMPERVIRENS (*The Evergreen Rose*). S. Europe and India. 1529.

This is a class of climbing roses which retain a great part of their foliage throughout the winter; but they are not, strictly speaking, evergreen. They are very strong growers, resembling in many respects the Ayrshire roses. The blooms are borne in big clusters, the flowers being mostly white or pink.

*Pruning*.—Prune in February, thinning sparingly and removing dead wood.

Best varieties :—
*Félicité Perpétue*. 1828. Rosette. Creamy-white.
*Flora*. Semi-double. Bright rose.
*Léopoldine d'Orléans*. Rosette. White, red-tipped.
*Princesse Marie*. 1829. Semi-double. Pink.
*Rampant*. Semi-double. Pure white.

ROSA SETIGERA (*Prairie Rose—Bramble-leaved Rose*). N. America. 1803. *Syn*. R. rubifolia.

This rose sends out strong shoots, sometimes 20 feet long in one season. The stem climbs, and is armed with strong, stout, nearly straight prickles. It is best grown on its own root, and bears deep rose-coloured blooms, changing to white in July. It likes to ramble over a low tree or wall, and does not require much pruning. Paul's Carmine Pillar, which was a chance seedling, doubtless has the Prairie Rose as one of its ancestors. It is a strong grower, throwing up base shoots, which should be left at the required height;

while the last year's shoots should be shortened, leaving the laterals long.

ROSA SIMPLICIFOLIA. Siberia and Persia. 1790. 3 feet. *Syns.* R. berberifolia; Hultheimia berberifolia; Lowea berberifolia.

This is a sweet-scented, dark-yellow rose, of low growth. The simple leaves are covered with down. It is somewhat tender, and requires a warm, sheltered place on a wall.

ROSA WICHURIAINA. *Syn.* R. Luciæ. Japan. 1893.

These are true creeping and trailing roses, which may be planted so as to cover bare banks, or a rockery, or to creep over roots or up pillars. The foliage is dark green, very much polished. The flowers were originally white but other colours have now been introduced. The hybrids are mostly crosses with the Tea roses.

*Pruning.*—WICHURIAINA type. Thin out old wood, leaving the young shoots long and allow them to ramble at will.

*Dorothy Perkins.* 1901. Semi-double. White, yellow centre.

*Jersey Beauty.* 1899. Single. Pale yellow, golden stamens.

*Rubra.* 1900. Semi-double. Deep rose, golden anthers.

*Wichuriaina.* 1893. Single. White, yellow anthers. TEA ROSE type. Excellent roses for fountains and loose pillars. Retain most of the old wood.

*Albéric Barbier.* 1900. Semi-double. White, yellow centre.

*Auguste Barbier.* 1901. Semi-double. Pink.

*Evergreen Gem.* 1903. Double. Yellow, changing to white.

*Gardenia.* 1899. Double. Bright yellow, changing to cream.

*Pink Roamer.* 1903. Single. Rose.

*René André.* 1900. Semi-double. Saffron yellow, tinted orange-red.

ROSES GROWING OVER A PORCH

RUBUS AUSTRALIS (*New Zealand Bramble—Bush Lawyer*) Rosaceæ. New Zealand. 8 feet. Climber. Pink or whitish. Early summer. Fruit yellow. Seed; layers. *Syn.* R. Schmidelioides.

This is a tall-growing species which requires the shelter of a wall. The leaves are very variable in form, being very often reduced to prickly midribs.

RUBUS FRUTICOSUS (*Bramble Blackberry*) Rosaceæ. Europe. Seed; layers.

Many varieties and hybrids of the ordinary Bramble and of other species are being cultivated now; they are grown principally for the sake of the fruit. Amongst the best known of these the following may be mentioned: the Logan-berry, a hybrid between the Aughinbauch Blackberry and a Red Raspberry; the Rathbun Blackberry, an American variety; the Strawberry Raspberry from Japan.

RUBUS LACINIATUS (*Parsley-leaved Bramble*) Rosaceæ. N. America. From 6 to 12 feet. White or rose-coloured. Fruit large; black. June to September. Seed; layers.

An ornamental plant with deeply-cut foliage. The fruit is produced very freely.

RUBUS ODORATUS (*Virginian Raspberry — Scented Bramble*) Rosaceæ. N. America. 1700. 5 feet. Purplish-red. Fruit reddish. June to August. Seed; layers.

A species with large showy blossoms.

RUBUS PHÆNICOLASIUS (*Japanese Wineberry*) Rosaceæ. Japan. 1877. 10 feet. Pale pink. Fruit crimson. June. Seed; layers.

A very vigorously growing Bramble, well fitted for covering trellis. The foliage is handsome, the fruit

large, bright crimson in colour, very sweet and juicy, and of great value for culinary purposes and for preserving.

SCHIZANDRA CHINENSIS Magnoliaceæ. N. China. 1860. From 10 to 12 feet. Climbing shrub. Pale rose. Summer. Ripened cuttings in sand under a glass. *Syns.* S. japonica; Kadsura chinensis; Maximowiczia chinensis.

A shrub with tall, twining stems bearing large leaves. The flowers are small, and are succeeded by scarlet berries, which remain for the greater part of the winter. It is fairly hardy, and may be used for clothing walls, pergolas, arbours, etc.

SCHIZANDRA HANCEANA Magnoliaceæ. S. China. Twining shrub. Scarlet, green at the base. Summer. Ripened cuttings in sand under a glass. *Syns.* Kadsura chinensis; Cosbæa coccinea.

This twiner is somewhat less hardy than S. chinensis, and it may be advisable to protect it during the winter. The flowers are large.

SCHIZOPHRAGMA HYDRANGEOIDES (*Climbing Hydrangea*) Saxifrageæ. Japan. 1879. From 10 to 20 feet. Deciduous climber. White or flesh-coloured. Autumn. Cuttings in sand under a bell-glass, with a little bottom heat; seed.

A climbing shrub nearly allied to the Hydrangea. It will grow in any good garden soil if planted against a warm, sunny wall. The slender stems send out rootlets that adhere to the wall, like those of the Ivy. It grows fairly freely, and blooms well if it has plenty of sun, and, at the same time, plenty of moisture. This plant is often confused with Hydrangea petiolaris; the main differences between the two are pointed out in the notes following the description of that species.

SMILAX ASPERA (*Prickly Ivy*) Liliaceæ. S. Europe. 1648. 8 feet. Evergreen climber. Whitish. July. Suckers.

A slender climber with pretty foliage, which is not grown so much as it deserves to be. It is moderately hardy, but does not like being exposed to strong winds. It may be used for climbing over rocks, tree stumps, etc. Variety Mauritanica is not quite so hardy, but it is more beautiful; a cool greenhouse is the best place for it.

SMILAX BONA-NOX Liliaceæ. N. America. 1739. From 5 to 10 feet. Evergreen climber. Greenish-white. June and July. Suckers. *Syn.* S. tamnoides.

This plant, with its shining green leaves shaped like those of the Black Bryony, is very useful for mixing with other creepers over banks, rocks and tree stumps. Variety Hastata has narrow leaves, thickly margined with small spines. Variety Rubens (*Syn.* S. rubens) has purplish-coloured tendrils. Plant in a light soil.

SMILAX HERBACEA (*Carrion Flower*) Liliaceæ. N. America. 1699. Herbaceous climber. Greenish-white. June. Root division.

The flowers of this species have an unpleasant odour, whence its common name. It is quite hardy, and makes a useful climber for banks, rocks, tree stumps, etc. Variety Simsii has more pointed leaves. Plant in a light soil.

SMILAX ROTUNDIFOLIA (*Green Briar*) Liliaceæ. N. America. 1888. Evergreen climber. Greenish. June. Root division. *Syn.* S. quadrangularis.

This is a tall growing climber which has its stems armed with scattered prickles. The foliage is pretty,

and mixes well with other creepers, such as the Ivy. Plant in a light soil in a position where cold blasts of wind cannot get to it.

SOLANUM CRISPUM (*Potato Tree*) Solanaceæ. Chili. 1824. From 12 to 14 feet. Wall shrub. Purple-blue. June. Seed sown in the open; division; cuttings.

In warm localities this shrub may be grown in the open, but in most places the shelter of a wall is necessary. The flowers are borne in large clusters in summer, and in some places yellowish-white fruit will succeed them. Plant in a light, rich loam, and prune hard in the autumn.

SOLANUM JASMINOIDES (*Jasmine Nightshade*) Solanaceæ. Brazil. 1838. 6 feet. Deciduous climber. Bluish-white. August. Seed in a hotbed; cuttings under glass.

This species appears to be hardy in the south of England, and in Ireland. It is a lovely creeper on a warm wall, and likes a light peaty soil; it may be planted with a north aspect if it is not too much exposed in the winter. The variety Floribundum bears more flowers and has smaller leaves. Variety Foliis variegatis has creamy blotches on the leaves.

SOLANUM WENDLANDI (*Wendland's Nightshade*) Solanaceæ. Costa Rica. 1882. Herbaceous. Lilac-blue. Summer. Seed; cuttings in a warm frame.

A beautiful plant, bearing large flowers, these being over 2 inches in diameter, in big bunches. It has been grown mostly in hothouses, but at Burford, near Dorking, it has been successfully grown on a sheltered wall out of doors. Protection from frost must be given.

SOLLEGA HETEROPHYLLA (*Australian Bluebell Creeper*) Pittosporeæ. Australia. 1830. 6 feet.

SOLANUM CRISPUM, ON A SOUTH WALL IN BERKSHIRE

Evergreen. Blue. July. Cuttings in sand under a glass.

A pretty twiner more often found in the greenhouse than out of doors, but there is no reason why it should not succeed on a warm south or south-west wall in mild districts.

SOPHORA TETRAPTERA (*Kowhai—New Zealand Laburnum*) Leguminosæ. New Zealand. 1772. From 6 to 12 feet. Evergreen. Yellow. May. Seed. *Syn.* Edwardsia tetraptera.

These should be planted on a south or south-west wall in warm districts. Variety Grandiflora, has flowers about 2 inches in length. Variety Microphylla (*Syn.* Edwardsia Macnabiana), has smaller flowers and more slender foliage. Both the varieties may be seen growing outside in Kew Gardens.

STAPHYLEA COLCHICA (*Bladder Nut*) Sapindaceæ. Caucasus. 1879. From 5 to 8 feet. Wall shrub. White. Summer. Suckers; layers; cuttings in autumn. *Syn.* Bumalda colchica.

A beautiful shrub to grow on a wall. It is quite hardy and likes partial shade. The large clusters of flowers are very effective.

STAUNTONIA HEXAPHYLLA Berberideæ. China and Japan. 1876. Evergreen climber. White. April. Cuttings of young, half-ripened shoots in sandy soil.

A very pretty twining plant with pinnate leaves. It is hardy enough for the southern and warmer districts, when grown against a sunny wall. Plant in sandy loam and leaf mould. Cut back the long trailing shoots in the autumn, leaving those which are to be allowed to flower in the following spring.

STRANVÆSIA GLAUCESCENS Rosaceæ. Temperate Himalayas. 20 feet. Evergreen. White. June. Grafting or budding on the common thorn.

This tree should be planted against a south wall and receive some protection in the winter; it thrives well in this position.

STUARTIA PENTAGYNA Ternstrœmiaceæ. N. America. 1785. 10 feet. Deciduous shrub. Cream coloured with red stamens. May to July. Layers; ripened cuttings in sand under a hand-glass. *Syn.* Malacodendron ovatum.

This is a choice shrub which deserves a trial in every garden; it is somewhat capricious, but it appears to succeed well in some districts. If it is grown against a sunny, sheltered wall, this will help the shoots to ripen, and further the production of the large flowers. Plant in a moist, peaty soil, mixed with loam.

STUARTIA PSEUDO-CAMELLIA Ternstrœmiaceæ. Japan. 1879. 12 feet. Deciduous shrub. Creamy white, with yellow stamens. Summer. Layers; ripened cuttings in sand under a hand-glass. *Syn.* S. grandiflora.

This very attractive shrub bears whiter and larger blossoms than either of the other two species mentioned. In places where it has become established in the southern districts, it appears to be sufficiently hardy to live through our winters. It may be planted in the open, or against a warm, sheltered wall.

STUARTIA VIRGINICA Ternstrœmiaceæ. N. America. 1743. 8 feet. Deciduous shrub. Creamy white, with crimson stamens. May. Layers; ripened cuttings in sand under a hand-light. *Syns.* S. malacodendron; S. Marylandica.

A fine shrub, bearing large flowers, some 3 inches in diameter. It is moderately hardy, and succeeds well if

planted against a sunny wall, sheltered from cold winds, in a light, moist soil.

TECOMA AUSTRALIS (*Churchill Island Jasmine —Wonga-wonga Vine*) Bignoniaceæ. Australia. 1793. Half-hardy creeper. Yellowish-white, with the inside tinged with red or purple. June. Cuttings of young shoots or roots; layers. *Syns.* T. diversifolia; Bignonia Pandorea.

This is a somewhat tender plant, which in most places must be treated as half-hardy. In some warm southern places it may be found to live through the winter, but a cool greenhouse is more suitable for it.

TECOMA CAPENSIS (*West Indian Honeysuckle*) Bignoniaceæ. Cape of Good Hope. 1823. 15 feet. Half-hardy creeper. Orange-scarlet. August. Cuttings of young shoots or roots; layers.

This species is too tender for out of doors, excepting in the warmest localities, and in these it should be planted against a sunny wall.

TECOMA RADICANS (*Trumpet Flower*) Bignoniaceæ. N. America. 1640. From 25 to 30 feet. Climbing shrub. Scarlet-red. July. Cuttings of the shoots; root division. *Syn.* Bignonia radicans.

This is a favourite climber for walls, pergolas, arbours and trellis. It climbs, like the Ivy, by means of aerial rootlets, and likes a south aspect. It is a very graceful plant, and bears very showy clusters of large, brightly coloured flowers in late summer, the corolla being 2 or 3 inches in length. Several varieties may be obtained, including:—

Variety *Minor*, smaller flowers of a bright scarlet colour.

Variety *Præcox*, flowering earlier than the type.

Variety *Thunbergii*, flowering later than the type.

A good, loamy soil is the most suitable, and a light, sunny situation enables the young wood to ripen well.

TEUCRIUM FRUTICANS (*Tree Germander*) Labiatæ. S. Europe. 1869. From 8 to 10 feet. Evergreen shrub. Blue. Summer. Cuttings in sandy soil under a glass, in spring or summer. *Syn.* T. latifolium.

A half-hardy shrub for a warm, south wall.

THLADIANTHA DUBIA Cucurbitaceæ. India and China. 1854. 5 feet. Annual. Yellow. July. Seed in a hotbed in spring.

A gourd-like plant with large cordate leaves, bearing green, oblong, ribbed fruit. It will grow in any soil, but does best against a sunny wall.

THUNBERGIA ALATA (*Black-eyed Susan*) Acanthaceæ. S. Africa. 1823. 4 feet. Annual twiner. Yellow, with a black eye. Seed in spring in a hotbed.

A well-known plant in conservatories, but one that is seldom seen outside in the garden. If the young plants are hardened off, planted out in June and allowed to twine up canes or low trellis, they look very effective in a flower border and bloom freely. There are several varieties of colour, including :—

Variety *Alba*. Pure white.
,, *Aurantiaca*. Light orange.
,, *Doddsii*. Yellowish-orange, with a rich purplish-violet eye.

TRACHELOSPERMUM CROCOSTOMUM Apocynaceæ. China. 6 feet. Creamy, yellow centre. July. Cuttings.

A new species, which may be seen in Kew Gardens, but very little is known about it at present. It flowers well and is a pretty wall plant. It somewhat resembles the Jasmine.

TRACHELOSPERUM JASMINOIDES Apocynaceæ. Shanghai. 1846. From 6 to 10 feet.

TRACHELOSPERMUM CROCOSTOMUM, TRAINED AGAINST A WALL

Evergreen. White, fragrant. Summer. Cuttings. *Syns.* Malonetia asiatica; Parechites jasminoides; Rhynchospermum jasminoides.

This creeper is generally to be seen in the greenhouse, but it has proved to be quite hardy enough to live through our winters in many parts of the country, when grown on a south-west wall. The flowers are waxy, and very fragrant.

TRICHOSANTHES ANGUINA (*Snake Gourd*) Cucurbitaceæ. India. 1735. 12 to 20 feet. Half-hardy climber. White. Summer. Seed sown in spring in a hotbed. *Syn.* T. colubrina.

A curious species of gourd, bearing red elongated twisted fruits. It must be treated as a half-hardy annual, and likes a loamy soil, mixed with well-rotted manure. The fruit is used in India as a vegetable.

TRICHOSANTHES JAPONICA Cucurbitaceæ. Japan. 1872. Half-hardy climber. Greenish-white. June. Seed sown in a hotbed in the spring.

An interesting plant with curiously-fringed flowers. If planted in a warm position, it may be left out during winter, but it should be covered with bracken after it dies down. Elsewhere it should be kept in a cool house during the winter, and planted out again in the spring.

TROPÆOLUM ADUNCUM (*Canary Creeper*) Geraniaceæ. Peru and Mexico. 1810. 8 feet. Annual climber. Yellow. June. Seed in spring. *Syns.* T. peregrinum; T. canariense.

An old favourite, very attractive with its pretty foliage and bright yellow flowers. It flourishes both in sun and shade, and is very useful for training on trellis with a north aspect.

TROPÆOLUM LOBBIANUM (*Lobb's Nasturtium*) Geraniaceæ. Columbia. 1843. 6 feet.

Annual climber. Orange. Late summer. Seed in April.

A most useful annual, with more or less hairy foliage. It can be used in a variety of ways, either as a hedge, climbing up sticks, or allowed to clamber over bushes, or old root stumps, or to cover trellis and arbours. There are many garden varieties, differing in colour, mostly yellow and scarlet; variety Fimbriatum has fringed petals. It is quite hardy in summer, but is cut down by the first hard frost.

TROPÆOLUM MAJUS (*Great Indian Cress*) Geraniaceæ. Peru. 1686. 8 feet. Annual climber. Orange-yellow. June to October. Seed in April.

Similar in most respects to and treated in the same way as T. Lobbianum; it differs in the absence of hairs. A most useful and showy plant, bearing bright-coloured flowers profusely, and climbing or trailing in all directions. The flowers and young foliage are frequently used in salads, whilst the young fruit makes an excellent pickle. Many varieties of colours are to be obtained.

TROPÆOLUM PENTAPHYLLUM (*Five-leaved Indian Cress*) Geraniaceæ. Buenos Ayres. 1829. 6 to 8 feet. Annual climber. Yellowish-red. August. Seed in April; division. *Syn.* Chymocarpus pentaphyllus.

A rapid grower, well adapted for covering pillars, walls, trellis, etc., in a sunny place. It forms tubers, which, if lifted before hard frost sets in, may be stored in dry sand until the following spring. The leaves are small, and have five spreading leaflets.

TROPÆOLUM POLYPHYLLUM (*Yellow Rock Indian Cress*) Geraniaceæ. Chili. 1827. 3 or 4 feet. Perennial trailer. Yellow. July and August. Seed in spring; tubers; cuttings.

TRICHOSANTHES JAPONICA

A tuberous-rooted species of much value in the garden. It delights in trailing over rocks, and old tree roots; and is excellent for a big rock garden, the dry situation suiting it well. It is a very distinct species, its digitate leaves being cut into ten or twelve leaflets. Once it is established it likes remaining undisturbed; dying down in the autumn, and springing up again in late spring.

TROPÆOLUM SPECIOSUM (*Flame-flowered Nasturtium*) Geraniaceæ. Chili. 1846. 8 to 12 feet. Herbaceous climber. Bright vermilion. July to October. Seed; division; cuttings.

A beautiful creeper, sending out long, graceful shoots with pretty foliage and brightly-coloured flowers springing from the axils of the leaves. This plant appears to thrive best in Scotland and the north of England, but it is worth while trying to establish it in any garden, in a cool position in a deep, rich and somewhat moist soil of fibrous loam, leaf mould and sand, and not exposed to the sun. The spring is the best time for planting the roots, and this is the best method of propagation; they should be put some 6 inches deep and the ground well watered; mulch in dry weather. If it is desired to raise the plants from seed, these should be planted as soon as they are ripe in a light soil, loam, sand and leaf mould, placed in a frame and kept moist. The young plants can be planted out in spring. There is no better effect in the garden than the long, graceful stem of this plant, allowed to clamber at will up walls, or trellis, and over other shrubs. The leaves are peltate with six lobes.

TROPÆOLUM TUBEROSUM (*Peruvian Nasturtium*) Geraniaceæ. Peru. 1827. 2 to 4 feet. Herbaceous climber. Scarlet and yellow. September. Seed; tubers.

A beautiful, tuberous-rooted climber, bearing a profusion of showy blossoms. The peltate leaves have five lobes. It is only half-hardy, and it is therefore advisable to lift the tubers in the autumn and store them in sand.

VIBURNUM MACROCEPHALUM (*Large-flowered Snowball Tree*) Caprifoliaceæ. China. 1844. 20 feet. Deciduous wall shrub. White. June. Layers; cuttings of half-ripened shoots in sand under a glass. *Syn.* V. Fortunei.

A plant bearing enormous clusters of flowers. It is not very hardy and thrives best against a wall.

VIBURNUM ODORATISSIMUM (*Sweet-scented Guelder Rose*) Caprifoliaceæ. China. 1818. 6 to 10 feet. Deciduous wall shrub. White. May. Layers; cuttings of half-ripened shoots in sand under a glass.

A fragrant, half-hardy species, which would probably stand the winter in warm districts with wall protection.

VIBURNUM OPULUS (*Guelder Rose—Dog Rowan Tree—Snowball Tree*) Caprifoliaceæ. Europe. 10 feet. Deciduous wall shrub. White. June and July. Layers; cuttings of half-ripened shoots in sand under a glass. *Syn.* V. edule; V. oxycoccos.

An old favourite, mostly grown in the open, but it will flourish very well against a wall. The type has flat clusters of flowers, the outer ones being large and sterile, the inner ones small and fertile, producing yellow and red berries. Variety Sterilis is more commonly seen in gardens; all the flowers are sterile and borne in large round clusters, hence the name of the Snowball tree. Variety Foliis variegatis has leaves variegated with white and yellow.

VIBURNUM TOMENTOSUM (*Woolly Guelder Rose*) Caprifoliaceæ. Japan and China. 1847. 6 feet. Deciduous wall shrub. White. May. Layers; cuttings of half-ripened shoots in sand under a glass. *Syn.* V. plicatum.

A plant bearing round heads of sterile flowers, and hairy leaves. It is better to give it the protection of a wall. Variety Plicatum has less hairy leaves.

VINCA MAJOR (*Greater Periwinkle*) Apocynaceæ. Great Britain. 2 feet. Evergreen. Blue-purple. April to June. Division.

Although this plant can scarcely be called a climber, it should be included amongst the plants that will clothe a low trellis or wall. Variety Elegantissima has leaves with white blotches. Variety Reticulata has yellow, reticulated leaves, and variety Alba bears white flowers.

VITEX AGNUS CASTUS (*Chaste Tree—Monk's Pepper Tree—Hemp Tree*) Verbenaceæ. S. Europe. 1670. 6 feet. Deciduous wall shrub. Pale-lilac. September. Cuttings in autumn under a hand-light.

A shrub which requires the shelter of a south wall, as it is liable to be cut down by hard frost. It has no special value.

VITIS ÆSTIVALIS (*American Summer Grape*) Ampelideæ. N. America. 1656. 20 feet. Deciduous climber. Green. May and June. Fruit black. October. Cuttings under glass; eyes; layers.

A hardy climber with large leaves and bearing small berries (the flowers possess a Mignonette-like scent). It may be distinguished by having a tendril missing at every third joint.

VITIS ARMATA Ampelidæ. China. 1903. Deciduous climber. Green. Summer. Cuttings under glass; layers.

A recently introduced plant, with handsome foliage, the stems and leaf-stalk being provided with green prickles. The leaves are large, heart-shaped, bronzy green when young, and deep green when mature, turning to a rich crimson in the autumn.

VITIS CALIFORNICA (*Californian Vine*) Ampelideæ. California. Deciduous climber. Green. May

and June. Fruit black, small. Cuttings under glass; eyes; layers.

A very vigorous plant, growing very tall; the leaves, covered with down, turn a brilliant crimson in autumn.

VITIS CAPRIOLATA Ampelideæ. Temperate Himalayas. Deciduous climber. Green. May and June. Fruit small, black. Cuttings under glass; layers.

A species that requires the protection of a wall, even in the south of England.

VITIS COIGNETIÆ (*Mme. Coignet's Vine*) Ampelideæ. Japan. 1884. Deciduous climber. Green. Summer. Fruit round, black. Seed; layers.

One of the most beautiful of all the vines. The leaves, covered on the under side with down, are very large and varying in colour, becoming crimson or claret-coloured in autumn. The tendrils are pink. It is a plant well worth growing.

VITIS CORDIFOLIA (*Chicken Grape—Frost Grape*) Ampelideæ. N. America. 1806. 12 feet. Deciduous climber. Green. Summer. Fruit blue or black, ripening after frosts. Seed; eyes; cuttings under glass.

A sweet-scented species of vine which delights in a moist spot. As in V. æstivalis, there is a tendril missing at every third joint.

VITIS ENGELMANNI (*Wall Virginian Creeper*) Ampelideæ. N. America. Deciduous climber. Cuttings; layers. *Syn.* V. muralis.

A species resembling V. quinquefolia in having its leaves palmately divided into five leaflets. The autumnal tints are even more brilliantly coloured, and it possesses

VIBURNUM ODORATISSIMUM

A VINE GROWING UP A FIR TREE

the convenient habit of clinging to walls, and other surfaces, by means of stem roots and suckers.

VITIS HETEROPHYLLA HUMULIFOLIA (*Variable Hop-leaved Vine—Turquoise-berried Vine*) Ampelideæ. N. China and Japan. 1868. 2 to 5 feet. Deciduous climber. Green. Summer. Fruit pale China blue, with black dots. Seed; eyes; cuttings under glass; layers.

This plant, a variety of V. heterophylla, *Syn.* V. Davidiana, differs from the rest in bearing pretty turquoise-blue berries in the autumn. The foliage is handsome, the leaves being deeply lobed. There is a variety with variegated leaves, which requires a sunny position.

VITIS INCONSTANS (*Small-leaved Virginian Creeper*) Ampelideæ. Japan. 1868. 20 feet. Deciduous climber. Eyes; cuttings; layers. *Syns.* V. japonica (of gardens); Ampelopsis Veitchii; A. tricuspidata.

One of the best-known creepers, popular both from its handsome foliage, and from its self-clinging habit. The leaves are very variable in shape, and turn a variety of tints in late summer, varying from pink, crimson, purplish-red to brown; variety Purpurea has more or less bronze-coloured foliage, and makes a very showy mass of rich colouring. It is easily propagated by cuttings taken from young wood in spring, placed in gentle heat.

VITIS LABRUSCA (*American Plum Grape — Northern Fox Grape*) Ampelideæ. N. America. 1656. 20 feet. Deciduous climber. Fruit purple or yellowish. Eyes; cuttings; layers.

A sweet-scented, strong-growing species, with very large heart-shaped leaves, covered with rusty down on the under sides. There is a tendril opposite each leaf, distinguishing it from some of those already mentioned.

VITIS LANATA (*Woolly Vine*) Ampelideæ. Himalayas. 1824. Deciduous creeper. Green. May. Fruit purple, small. Eyes; cuttings; layers.

A plant with leaves covered with down. It turns a beautiful scarlet colour in autumn.

VITIS QUINQUEFOLIA (*Virginian Creeper—American Ivy—False Grape*) Ampelideæ. N. America. 1629. Deciduous climber. Greenish-purple. June. Cuttings with a good eye in September. *Syns.* Ampelopis quinquefolia; A. hederaceæ.

A well-known creeper, which may be used for many purposes, on the wall of a house, to cover arbours, verandahs, or to climb over old tree stumps, and up either live or dead trees. The foliage turns to various shades of crimson, scarlet, purple and brown in autumn, and always presents a very striking appearance. Each leaf consists of five leaflets. This plant requires a support, as it has no self-clinging properties. Several varieties are to be obtained.

VITIS ROMANETI (*Romanet's Vine*) Ampelideæ. China. 1888. Deciduous climber. Fruit black. Cuttings; layers. *Syns.* V. pseudospina; Ampelovitis Romaneti.

A vigorous plant, distinguished by the branches and petioles being covered with short hairs. The leaves are bright-green above, and silvery-white beneath. In the autumn these assume a purplish-red colour.

VITIS VINIFERA (*Grape Vine*) Ampelideæ. South of the Caspian Sea. Deciduous climber. Green. June. Fruit purple or green. Cuttings; layers.

The parent of all the grape vines, and a well-known climber. There are many varieties, amongst them the following are worth growing: Variety Apiifolia (or Laciniosa), with leaves cut into several lobed leaflets;

WISTARIA CHINENSIS ON A COTTAGE ROOF

variety Purpurea, with bronze-coloured leaves, turning brilliant purple in autumn.

VITIS VINIFERA, variety Davidii (*David's Prickly Vine*) Ampelideæ. N. China. 1885. Deciduous climber. Green. Fruit small, black. Seed. *Syn.* Spinovitis Davidii; Vitis Davidiana.

This plant is closely allied to Vitis Romaneti; its stem is covered with spines. It is quite hardy.

VITIS VULPINA (*Southern Fox Grape—Bullet Grape—Muscadine Bullace*) Ampelideæ. N. America. Deciduous climber. Green. May. Fruit purple. Cuttings; layers. *Syn.* V. rotundifolia.

A species of vine with small, glossy, green leaves, the fruit possessing the odour of musk. It differs from the other vines from N. America, in having smooth bark which does not peel off.

WISTARIA BRACHYBOTRYS (*Short-clustered Wistaria*) Leguminosæ. Japan. 3 to 5 feet. Deciduous climber. Violet-purple. April. Seed; layers of young, growing shoots in summer, detached from the plant in the following year.

A low-growing species, not very often seen in this country.

WISTARIA CHINENSIS (*Chinese Kidney-bean Tree*) Leguminosæ. China. 1816. 20 feet. Deciduous climber. Mauve-blue. May and June. Seed; layers of young, growing shoots in summer, detached from the plant in the following year. *Syns.* W. floribunda; W. sinensis; Glycine sinensis.

A delightful climber, if it is allowed plenty of head room, bearing a profusion of bunches of big flowers. When young, it is a slow grower, and requires to be well trained. It may be grown equally well on walls, arbours, pergolas, or on open trellis. It delights in a

rich, light, sandy soil, and a sunny position. Variety Alba bears pure white, sweet-scented flowers; variety Macrobotrys has very big racemes of blossoms; variety Flore pleno, with double flowers, is of little value.

WISTARIA FRUTESCENS (*American Kidney-bean Tree*) Leguminosæ. N. America. 1724. 10 feet. Deciduous climber. Purple, varying to white. July. Seed; cuttings; layers of young, growing shoots, detached from the plant in the following year. *Syns.* Glycine frutescens; Thyranthus frutescens.

A smaller growing plant than W. Chinensis, but it may be grown in the same way, against a wall, over pergolas and arbours, or up trellis. It likes a good, light soil, and a sunny position. There are the following varieties: Variety Alba (*syn.* Nivea), white flowers; variety Backhousiana, violet, in long, compact racemes; variety Magnifica, clear blue with a yellow spot on the standard; variety Purpurea, violet-purple flowers.

WISTARIA JAPONICA (*Japanese Wistaria*) Leguminosæ. Japan. Deciduous shrub. White. July and August. Seeds; cuttings; layers of young, growing shoots in summer, detached from the plant in the following year. *Syn.* Milletia japonica.

A species with white flowers in simple racemes. It is seldom grown in this country.

WISTARIA MULTIJUGA (*Large-flowered Wistaria*) Leguminosæ. Japan. 1874. Deciduous climber. Pale-purple and lilac. Summer. Seed; cuttings; layers of young, growing shoots in summer, detached from the plant in the following year. *Syn.* W. grandiflora.

The racemes of this plant are said to measure as much as two feet in length, the blossoms themselves are somewhat smaller than those of W. chinensis. It is a plant rarely seen in this country, but it should be worth cultivating.

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Kermesina, Viticella type.

Lady Bovill, Viticella type.
„ Caroline Neville, Lanuginosa type.
Lady Londesborough, Patens type.
Lady S. de Radcliffe, Jackmanni type.
La France, Lanuginosa type.
Lanuginosa, Lanuginosa type.
„ candida, Lanuginosa type.
Lawsoniana, Lanuginosa type.
Lilacina florabunda, Lanuginosa type.
Lord Londesborough, Patens type.
Lord Napier, Patens type.
„ Neville, Lanuginosa type.
Louis van Houtte, Lanuginosa type.
Lucie Lemoine, Florida type.

Madame Edouard André, Jackmanni type.
Madame Grange, Viticella type.
Madame Van Houtte, Lanuginosa type.
Magnifica, Jackmanni type.
Maiden's Blush, Patens type.
Marcel Moser, Lanuginosa type.
Marie Lefevbre, Lanuginosa type.
Miss Bateman, Patens type.
„ Crawshay, Patens type.
Mrs. Bush, Lanuginosa type.
„ Cholmondeley, Jackmanni type.
Mrs. G. Jackman, Patens type.
„ Hewett, Patens type.
„ Hope, Lanuginosa type.
„ Quilter, Patens type.

Nelly Moser, Lanuginosa type.

Otto Froebel, Lanuginosa type.

Paniculata, Graveolens type.
Princess Beatrice, Lanuginosa type.
Princess of Wales, Lanuginosa type.
Prince of Wales, Jackmanni type.
Purpurea elegans, Lanuginosa type.

Robert Hanbury, Lanuginosa type.
Rubella, Jackmanni type.

Sir Garnet Wolseley, Patens type.
Sir Trevor Lawrence, Coccinea hybrid.
Snow-white Jackmanni, Jackmanni type.
Standishii, Patens type.
Star of India, Jackmanni type.
Stella, Patens type.

The Queen, Patens type.
Thomas Moore, Jackmanni type.
Tunbridgensis, Jackmanni type.

Velutina purpurea, Jackmanni type.
Vesta, Patens type.
Ville de Lyon, Viticella type.
Vitalba, Graveolens type.
Viticella alba, Viticella type.
Viticella rubra grandiflora, Viticella type.

Wilfordi, Graveolens type.
William Kennett, Lanuginosa type.

Clematis cylindrica, see C. crispa *syn.*
Clematis divaricata, see C. eriostemon, *syn.*
Clematis flava, see C. orientalis *syn.*
Clematis Fortunei (Hort), see C. florida *syn.*
Clematis fragrans, see C. flammula *syn.*
Clematis fragrans, see C. virginiana *syn.*
Clematis graveolens, see C. orientalis *syn.*
Clematis Hendersoni, see C. eriostemon *syn.*
Clematis japonica, see C. apiifolia *syn.*
Clematis maritima, see C. flammula *syn.*
Clematis montana (Hort), see C. connata *syn.*
Clematis nutans, *var.* æthusifolia, see C. æthusifolia *syn.*
Clematis odorata, see C. montana *syn.*
Clematis paniculata (Hort.), see C. flammula *syn.*
Clematis parviflora, see C. campaniflora *syn.*
Clematis pedicellata, see C. cirrhosa *syn.*
Clematis polymorpha, see C. cirrhosa *syn.*
Clematis revoluta, see C. campaniflora *syn.*
Clematis semitriloba, see C. cirrhosa *syn.*
Clematis Shillingii, see C. crispa *syn.*
Clematis Simsii, see C. crispa *syn.*
Clematis taurica, see C. vitalba *syn.*
Clematis texensis, see C. viorna coccinea *syn.*
Clematis viorna (Andr.), see C. crispa *syn.*
Clematis viornioides, see C. campaniflora *syn.*
Clematis virginiana (Lowe), see C. apiifolia *syn.*
Clematis Wilfordi, see C. orientalis *syn.*
Climbing Dog's Bane, see Periploca græca.
Climbing Fumitory, see Adlumia cirrhosa.
Climbing Hempweed, see Mikania scandens.
Cluster Flower, see Cestrum Parqui.
Coignet's Vine, see Vitis Coignetiæ.
Colletia armata, see C. spinosa *syn.*
,, Bictonensis, see C. cruciata *syn.*
Colletia ferax, see C. spinosa *syn.*
,, horrida, see C. spinosa *syn.*
Colletia polyacantha, see C. spinosa *syn.*
Colletia serratifolia, see Discaria serratifolia *syn.*
Colletia valdiviana, see C. spinosa *syn.*
Colquhounia tomentosa, see C. coccinea *syn.*
Colquhounia vestita, see C. coccinea *syn.*
Convolvulus major, see Ipomæa purpurea *syn.*
Convolvulus minor, see C. tricolor *syn.*
Convolvulus nil, see Ipomæa hederacea *syn.*
Convolvulus panduratus, see Ipomæa pandurata *syn.*
Convolvulus pubescens, see C. hederacea *syn.*
Convolvulus purpureus, see Ipomæa purpurea *syn.*
Convolvulus sylvaticus, see Calystegia sylvatica *syn.*
Copper Plum, see Prunus divaricata atro-purpurea *syn.*
Coral Barberry, see Berberidopsis.
Corchorus japonicus, see Kerria japonicus.
Corydalis fungosa, see Adlumia cirrhosa *syn.*
Cosbæa coccinea, see Schizandra Hanceana *syn.*
Cotton Tree, see Plagianthus betulinus *syn.*
Cratægus arbutifolia, see Heteromeles arbutifolia *syn.*
Cress, Great Indian, see Tropæolum magus.

Crimson Thread Flower, see Cæsalpinia Gilliesii.
Cucurbita melanosperma, see C. ficifolia *syn.*
Cup Flower, see Grammatocarpus volubilis.
Custard Apple, see Asimina triloba.
Cycoctomum roseum, see Cynanchum roseum *syn.*
Cydonia lagenaria, see Cydonia japonica *syn.*
Cydonia speciosa, see Cydonia japonica *syn.*
Cynanchum erectum, see Marsdenia erecta *syn.*

Dahlia, Climbing, see Hidalgoa Wercklei.
Daisy Tree, see Olearia.
Date Plum, see Diospyros Kaki.
David's Harp, see Polygonum multiflorum.
David's Peach, see Prunus Davidiana.
David's Prickly Vine, see Spinovitis Davidii.
David's Vine, see Ampelovitis Davidii.
Decumaria sarmentosa, see D. barbara *syn.*
Desmodium penduliflorum, see Lespedeza bicolor *syn.*
Diplocalyx coccinea, see Mitraria coccinea *syn.*
Diplopappus ericoides, see Aplopappus ericoides *syn.*
Dog Rowan Tree, see Viburnum opulus.
Dog's Bane, Climbing, see Periploca græca.
Dogwood, see Rhus venenata.
" " Strawberry, see Cornus capitata.
Dolichos hirsutus, see Pueraria Thunbergiana *syn.*
Dolichos japonicus, see Pueraria Thunbergiana *syn.*
Dolichos lignosus, see D. Lablab *syn.*
Dolichos purpureus, see D. Lablab *syn.*
Dracocephalum cordatum, see Cedronella cordata *syn.*
Drimys chilense, see D. Winteri *syn.*
Dutchman's Pipe, see Aristolochia Sipho.

East Indian Hawthorn, see Raphiolepis indica.
Ebony, Mountain, see Bauhinia corymbosa.
Ebony, Yunnan Mountain, see Bauhinia Yunnanensis.
Echinocystis californica, see Megarrhiza Californica *syn.*
Edwardsia Macnabiana, see Sophora tetraptera, var. Microphylla *syn.*
Edwardsia tetraptera, see Sophora tetraptera *syn.*
Elæagnus canadensis, see E. argentea *syn.*
Elæagnus crispa, see E. longipes *syn.*
Elæagnus edulis, see E. multiflora *syn.*
Elæagnus longipes, see E. multiflora *syn.*
Elæagnus odorata, see E. longipes *syn.*
Elæagnus rotundifolia, see E. multiflora *syn.*
Ericameria microphylla, see Aplopappus ericoides *syn.*
Escallonia Montevidensis, see E. floribunda *syn.*
Eugenia apiculata, see Myrtus Luma *syn.*
Eugenia Luma, see Myrtus Luma *syn.*
Eugenia Ugni, see Myrtus Ugni *syn.*
Eupatorium scandens, see Mikania scandens *syn.*
Eurybia Gunniana, see Olearia stellulata *syn.*
Eustrephus angustifolia, see E. grandiflora *syn.*
Eustrephus Brownii, see E. grandiflora *syn.*
Everlasting Pea, see Lathyrus.
" Rose, see Rosa sempervirens.
Everlasting, Rosemary leaved, see Ozothamnus rosmarinifolius.

Fabricia lævigata, see Leptospermum lævigatum *syn.*
False Camellia, see Stuartia pseudo-camellia.

False Grape, see Vitis quinquefolia.
False Heath, see Fabiana imbricata.
Fiery Thorn, see Cratægus pyracantha Lelandi.
Fire bush, see Embothrium coccineum.
Flame flower, see Tropæolum speciosum.
Fortune's Yellow, see Rosa Fortunei.
Fox Grape, see Vitis Labrusca.
,, ,, Southern, see Vitis vulpina.
Fragrant Olive, see Osmanthus fragrans.
Frost Grape, see Vitis cordifolia.
Fuchsia, Currant, see Ribes speciosum.
Fuchsia, Gooseberry, see Ribes speciosum,
Fumitory, Climbing, see Adlumia cirrhosa.

Galvesia spicata, see Ercilla volubilis *syn.*
Gerard's Indigo, see Indigofera Gerardiana.
Glory Pea, see Clianthus Dampieri.
Glory Vine, see Clianthus puniceus.
Glycine, see Apios tuberosa.
,, Comptoniana, see Hardenbergia Comptoniana *syn.*
Golden Bell, see Forsythia.
Gordonia pyramidalis, see Gordonia Lasianthus *syn.*
Gourd, see Cucurbita.
Gourd, Snake, see Trichosanthes anguina.
Grand Mogul, see Cucurbita maxima.
Grape Vine, see Vitis vinifera.
Green Briar, see Smilax rotundifolia.
Grevillea thyrsoides, see G. rosmarinifolia *syn.*
Guelder Rose, see Viburnum.
Gum Box, see Escallonia.
Gum cistus, see Cistus ladaniferus.

Habrothamnus elegans, see Cestrum elegans *syn.*
Habrothamnus purpureus, see Cestrum elegans *syn.*
Haplopappus, see Aplopappus *syn.*
Hardenbergia digitata, see H. Comptoniana *syn.*
Hardenbergia Huegelii, see H. Comptoniana *syn.*
Hardenbergia Lindleyi, see H. Comptoniana *syn.*
Hardenbergia macrophylla, see H. Comptoniana *syn.*
Hardenbergia makoyana, see H. Comptoniana *syn.*
Hawthorn, East Indian, see Raphiolepis indica.
Hawthorn, Indian, see Raphiolepis japonica integerrima.
Hawthorn, Japanese, see Raphiolepis ovata.
Heath, False, see Fabiana imbricata.
Helichrysum rosmarinifolium, see Ozothamnus rosmarinifolius *syn.*
Hempweed, Climbing, see Mikania scandens.
Hemp Tree, see Vitex Agnus-Castus.
Himalayan Briar, see Rosa moschata.
Hog Pea-nut, see Amphicarpæa monoica.
Honeysuckle, see Lonicera.
,, West Indian, see Tecoma capensis.
Hop, see Humulus.
Hop-leaved Vine, see Vitis heterophylla humilifolia.
Hultheimia berberifolia, see Rosa simplicifolia *syn.*
Hydrangea, Climbing, see Schizophragma hydrangeoides.
Hydrangea scandens, see H. petiolaris *syn.*

Indian Cress, see Tropæolum.
,, Hawthorn, see Raphiolepis japonica integerrima.
Indigo, see Indigofera Gerardiana.
Indigofera floribunda, see I. Gerardiana *syn.*
Ipomæa jalapa, see I. purga *syn.*
Ipomæa Nil, see I. hederacea *syn.*
Ivy, see Hedera.
Ivy, American, see Vitis quinquefolia.

Ivy, New Zealand, see Muehlenbeckia complexa.
Ivy, Poison, see Rhus toxicodendron.
Ivy, Prickly, see Smilax aspera.

Jalap, see Ipomæa purga.
Japanese Hawthorn, see Raphiolepis ovata.
Japanese Medlar, see Photinia japonica.
Japanese Persimmon, see Diospyros Kaki.
Japanese Quince, see Pyrus japonica.
Japanese Wineberry, see Rubus phænicolasius.
Jasmine, see Jasminum.
Jasmine, Churchill Island, see Tecoma australis.
Jasmine, Nightshade, see Solanum jasminoides.
Jasminoides flaccida, see Lycium halimifolium *syn.*
Jasminum chrysanthum, see Jasminum humile *syn.*
Jasminum pubigerum, see Jasminum humile *syn.*
Jasminum Wallichianum, see Jasminum humile *syn.*
Jews' Mallow, see Kerria japonica.
Jointed Staff-tree, see Celastrus articulatus.

Kadsura chinensis, see Schizandra chinensis *syn.*
Kadsura chinensis, see Schizandra Hanceana *syn.*
Kaki, see Diospyros Kaki.
Kennedya macrophylla, see Hardenbergia Comptoniana *syn.*
Kidney-bean Tree, American, see Wistaria frutescens.
Kidney Bean-tree, Chinese, see Wistaria chinensis.
Knotwort, see Polygonum.
Kolomikta mandschurica, see Actinidia Kolomikta *syn.*
Kowhai, see Sophora tetraptera.
Kousa Strawberry tree, see Cornus Kousa.

Lablab, see Dolichos Lablab.
Laburnum, Nepaul, see Piptanthus nepalensis.
Laburnum, New Zealand, see Sophora tetraptera.
Lacathea florida, see Gordonia pubescens *syn.*
Lathyrus angustifolius, see L. sylvestris platyphyllus *syn.*
Lathyrus Armitageanus, see L. nervosus *syn.*
Lathyrus Drummondii, see L. rotundifolius.
Lathyrus latifolius, see L. sylvestris platyphyllus *syn.*
Lathyrus magellanicus, see L. nervosus.
Lathyrus miniatus, see L. rotundifolius.
Lathyrus pedunculatus, see L. rotundifolius.
Leather flower, see Clematis viorna.
Lemon-scented Verbena, see Lippia citriodora.
Lily Tree, see Magnolia.
Linnæa, see Abelia *syn.*
Lion's Tail, see Leonotis Leonurus.
Loblolly Bay, see Gordonia.
Lonicera chinensis, see L. japonica *syn.*
Lonicera Fraseri, see L. flava *syn.*
Lophospermum atrosanguineum, see Rhodochiton volubilis *syn.*
Lophospermum erubescens, see Maurandia erubescens *syn.*
Lophospermum rhodochiton, see Rhodochiton volubilis *syn.*
Lophospermum scandens, see Maurandia scandens, *syn.*
Loquat, see Eriobotrya japonica.
Loura berberifolia, see Rosa simplicifolia *syn.*
Luma, see Myrtus Luma.
Lycium barbarum, see L. chinense *syn.*
Lycium lanceolatum, see L. chinense *syn.*
Lycium ovatum, see L. halimifolium *syn.*
Lycium turbinatum, see L. halimifolium *syn.*
Lycium vulgare, see L. Europæum *syn.*
Lycium vulgare, see L. halimifolium *syn.*

Macartney Rose, see Rosa bracteata.
Magic Tree, see Cantua buxifolia.
Magnolia fœtida, see M. grandiflora *syn.*
Magnolia fragrans, see M. glauca *syn.*
Magnolia glauca, var. Thunbergiana, see M. obovata *syn.*
Magnolia Halleana, see M. stellata *syn.*
Magnolia longifolia, see M. glauca *syn.*
Magnolia precia, see M. conspicua *syn.*
Magnolia purpurea, see M. obovata *syn.*
Magnolia Yulan, see M. conspicua *syn.*
Malacodendron ovatum, see Stuartia pentagyna *syn.*
Malonetia asiatica, see Trachelospermum jasminoides *syn.*
Malus japonica, see Cydonia japonica *syn.*
Mastacanthus sinensis, see Caryopteris mastacanthus *syn.*
Maximowiczia chinensis, see Schizandra chinensis *syn.*
May Bush, Californian, see Photinia arbutifolia.
Medick, see Medicago falcata.
Medlar, Japanese, see Photinia japonica.
Menispermum angulatum, see Menispermum canadense *syn.*
Menispermum smilacinum, see Menispermum canadense *syn.*
Meratia, see Chimonanthus *syn.*
Mespilus arbutifolia, see Heteromeles arbutifolia *syn.*
Mespilus japonica, see Eriobotrya japonica *syn.*
Mexican Orange Flower, see Choisya ternata *syn.*
Michauxia sessilis, see Gordonia pubescens *syn.*
Milletia japonica, see Wistaria japonica *syn.*
Mina lobata, see Ipomæa versicolor *syn.*
Mitre Pod, Scarlet, see Mitraria coccinea.
Mock Orange, see Philadelphus.
Momordica muricata, see M. Charantia *syn.*
Monk's Pepper Tree, see Vitex Agnus Castus.
Monthly Rose, see Rosa indica.
Montpelier Scammony, see Cynanchum acutum.
Moon Seed, see Menispermum canadense.
Moon Trefoil, see Medicago arborea.
Morning Glory, see Ipomæa.
Mountain Ebony, see Bauhinia corymbosa.
Mountain Sweet, see Ceanothus americanus.
Moustache Bush, see Caryopteris mastacanthus.
Muscadine, see Vitis vulpina.
Musk Melon, see Cucurbita Pepo.
,, Rose, see Rosa moschata.
Myrtle, see Myrtus.
Myrtophyllum chilense, see Azara microphylla *syn.*

Nandin, see Nandina domestica.
Nasturtium, see Tropæolum.
Nepaul Laburnum, see Piptanthus nepalensis.
Nepaul Mahonia, see Berberis nepalensis.
New Jersey Tea Ball, see Ceanothus americanus.
New Zealand Ivy, see Muehlenbeckia complexa.
New Zealand Laburnum, see Sophora tetraptera.
Nightshade Jasmine, see Solanum jasminoides.
Nightshade, see Solanum.

Oak, Poison, see Rhus toxicodendron.
Œnoplea, see Berchemia *syn.*
Old Man's Beard, see Clematis vitalba.
Olea fragrans, see Osmanthus fragrans *syn.*
Olearia dentata, see Olearia macrodonta *syn.*
Olearia Gunniana, see O. stellulata *syn.*
Oleaster, see Elæagnus.
Olive, Fragrant, see Osmanthus fragrans.
Olive Wild, see Elæagnus.

Orange Flower, see Choisya ternata.
Otago Ribbon Tree, see Plagianthus betulinus.

Pachyrhizus Thunbergianus, see Pueraria Thunbergiana *syn.*
Papaw, see Adminia triloba.
Parechites, see Trachelospermum jasminoides *syn.*
Parrot's Beak, see Clianthus puniceus.
Passion Flower, see Passiflora.
Pea, see Lathyrus.
Peach, see Prunus Davidiana.
Periphragmos buxifolia, see Cantua buxifolia *syn.*
Periploca maculatum, see P. græca *syn.*
Periwinkle, see Vinca major.
Persica Davidiana, see Prunus Davidiana *syn.*
Persimmon, Japanese, see Diospyros Kaki.
Peruvian Magic Tree, see Cantua buxifolia.
Phænocodon, see Lapageria *syn.*
Philadelphus californicus, see P. Gordonianus *syn.*
Philadelphus floribundus, see P. grandiflorus *syn.*
Philadelphus latifolius, see P. grandiflorus *syn.*
Philadelphus speciosum, see P. grandiflora *syn.*
Philadelphus triflorus, see P. Coronarius *syn.*
Phlomis Leonurus, see Leonotis Leonurus *syn.*
Photinia arbutifolia, see Heteromeles arbutifolia *syn.*
Photinia japonica, see Eriobotrya japonica, *syn.*
Physianthus albens, see Araujia sericifolia *syn.*
Physianthus auricomus, see Araujia grandiflora *syn.*
Plum, Copper, see Prunus divaricata atropurpurea.
Plum, Grape, see Vitis Labrusca.
Poinciana Gilliesii, see Cæsalpinia Gilliesii *syn.*
Poison Berry, see Cestrum elegans.
,, Elder, see Rhus venenata.
,, Ivy, see Rhus toxicodendron.
Poison Oak, see Rhus toxicodendron.
Poison Sumach, see Rhus toxicodendron.
Poison Vine, see Rhus toxicodendron.
Pomegranate, see Punica granatum.
Porcelia triloba, see Asimina triloba *syn.*
Potato Tree, see Solanum crispum.
Potato Vine, see Ipomæa pandurata.
Prairie Rose, see Rosa setigera.
Prickly Ivy, see Smilax aspera.
,, Vine, see Spinovitis Davidii.
Prunopsis Lindleyi, see Prunus triloba *syn.*
Prunus cerasifolia atropurpurea, see Prunus divaricata atropurpurea *syn.*
Prunus Pissardii, see Prunus divaricata atropurpurea *syn.*
Prunus virgata, see Prunus triloba *syn.*
Pseudo chænomeles Maulei, see Cydonia Maulei *syn.*
Pterostyrax corymbosum, see Halesia corymbosa *syn.*
Pumpkin, see Cucurbita.
Pyracanthus Lelandi, see Cratægus pyracantha Lelandi *syn.*
Pyrus japonica, see Cydonia japonica *syn.*
Pyrus Maulei, see Cydonia Maulei *syn.*

Quillaia petiolaris, see Azara dentata *syn.*
Quinaria, see Ampelopsis *syn.*
Quince, Japanese, see Cydonia japonica *syn.*
Quince, Maule's, see Cydonia Maulei.

Raphiolepis ovata, see Raphiolepis japonica *syn.*
Rhamnus scandens, see Berchemia volubilis *syn.*
Rhaph olepis, see Raphiolepis *syn.*
Rhus ambigua, see R. toxicodendron *syn.*
Rhus diversifolia japonica, see R. toxicodendron *syn.*

Rhus vernix, see R. venenata *syn.*
Rhynchospermum jasminoides, see Trachelospermum jasminoides *syn.*
Ribbon Tree, Otago, see Plagianthus betulinus.
Ribes fuchsioides, see R. speciosum *syn.*
Ribes stamineum, see R. speciosum *syn.*
Robsonia speciosa, see Ribes speciosum *syn.*
Rock Rose, see Cistus.
,, Spray, see Cotoneaster microphylla.
Romanet's Vine, see Vitis Romaneti.
Romana globosa, see Buddleia globosa *syn.*
Rosa arvensis, see R. repens *syn.*
,, berberifolia, see R. simplicifolia *syn.*
Rosa camelliæfolia, see R. sinica *syn.*
Rosa polyantha, see R. multiflora *syn.*
Rosa rubifolia, see R. setigera *syn.*
Rosa sinica, see R. lævigata *syn.*
Roses (cultivated) :—
Adelina Viviand Morel, see Rosa indica odorata. (N.)
Aglaia, see Rosa multiflora scandens.
Aimée Vibert, see Rosa indica odorata. (N.)
Alberic Barbier, see Rosa Wichuriaina.
Alister Stella Gray, see Rosa indica odorata. (N.)
Amadis, see Rosa alpina.
Ard's Rover, see Rosa indica odorata. (H. T.)
Armosa, see Rosa Bourboniana.
Auguste Barbier, see Rosa Wichuriaina.

Bardou Job, see Rosa indica odorata. (H. T.)
Belle Lyonnais, see Rosa indica odorata. (N.)
Bennett's Seedling, see Rosa arvensis.
Billiard et Barré, see Rosa indica odorata. (T.)
Blairii, see Rosa indica hybrida.
Blush Rambler, see Rosa multiflora scandens.
Bouquet d'Or, see Rosa indica odorata. (N.)

Carmine Pillar, see Rosa setigera.
Celine Forestier, see Rosa indica odorata. (N.)
Charles Lawson, see Rosa indica hybrida.
Cheshunt Hybrid, see Rosa indica odorata. (H. T.)
Claire Jacquier, see Rosa multiflora scandens.
Climbing Mrs. W. J. Grant, see Rosa indica odorata. (T.)
Coupé d'Hébé, see Rosa indica hybrida.
Cramoisie supérieure, see Rosa indica.
Crimson Rambler, see Rosa multiflora scandens.

Dawn, see Rosa Bourboniana hybrida.
Dawson, see Rosa multiflora scandens.
Dr. Rouges, see Rosa indica odorata. (N.)
Dorothy Perkins, see Rosa Wichuriaina.
Dundee Rambler, see Rosa arvensis.

Eleanor Berkeley, see Rosa multiflora scandens.
Electra, see Rosa multiflora scandens.
Euphrosyne, see Rosa multiflora scandens.
Evergreen Gem, see Rosa Wichuriaina.
E. Veyrat Hermanos, see Rosa indica odorata. (T.)

Felicité perpétue, see Rosa sempervirens.
Flora, see Rosa sempervirens.
Francois Crousse, see Rosa indica odorata. (T.)
Fulgens, see Rosa indica hybrida.

Gardenia, see Rosa Wichuriaina.
Gloire de Dijon, see Rosa indica odorata. (T.)

Gloire des Rosomanes, see Rosa Bourboniana hybrida.
Gracilis, see Rosa alpina.
Grandiflora, see Rosa multiflora scandens.
Gruss an Teplitz, see Rosa indica odorata. (T.)

Helène, see Rosa multiflora scandens.
Henriette de Beauvau, see Rosa indica odorata. (T.)

Inermis Morletti, see Rosa alpina.

Jersey Beauty, see Rosa Wichuriaina.

Madame Alfred Carrière, see Rosa indica odorata. (T.)
Madame Berard, see Rosa indica odorata. (T.)
Madame d'Arblay, see Rosa indica hybrida. (Musk.)
Madame Eugène Verdier, see Rosa indica odorata. (T.)
Madame Isaac Perèire, see Rosa Bourboniana.
Madame Pierre Cochet, see Rosa indica odorata. (T.)
Madame Plantier, see Rosa Bourboniana hybrida.
Marechal Niel, see Rosa indica odorata. (N.)
Monsieur Desir, see Rosa indica odorata. (H. T.)
Mrs. F. W. Flight, see Rosa multiflora scandens.
Mrs. Paul, see Rosa Bourboniana.

Ophirie, see Rosa indica odorata. (N.)

Pink Roamer, see Rosa Wichuriaina.
Princess Marie, see Rosa sempervirens.
Purity, see Rosa Bourboniana hybrida.

Queen Alexandra, see Rosa multiflora scandens.

Rampant, see Rosa Sempervirens.
Reine Marie Henriette, see Rosa indica odorata. (H. T.)
Reine Olga de Wurtemburg, see Rosa indica odorata. (H. T.)
René André, see Rosa Wichuriaina.
Reve d'Or, see Rosa indica odorata. (N.)
Rubin, see Rosa multiflora scandens.
Rubra, see Rosa Wichuriaina.
Ruga, see Rosa arvensis.

Setina, see Rosa Bourboniana.
Souvenir de la Malmaison, see Rosa Bourboniana.
Souvenir de Mme. Viennot, see Rosa indica odorata. (T.)
Splendens, see Rosa arvensis.

Tea Rambler, see Rosa indica odorata. (T.)
The Garland, see Rosa indica hybrida.
The Lion, see Rosa multiflora scandens.

Wallflower, see Rosa multiflora scandens.
Waltham Climber, No. 3, see Rosa indica odorata. (H. T.)
Waltham Rambler, see Rosa multiflora scandens.
William Allen Richardson, see Rosa indica odorata. (T.)

Rose Box, see Cotoneaster.
Rosemary, see Rosmarinus officinalis.
Rubus Schmidelioides, see Rubus australis *syn.*

Sarsaparilla Tree, see Hardenbergia Comptoniana.
Scammony, see Cynanchum.
Scarlet Mitre Pod, see Mitraria coccinea.
Schizandra japonica, see Schizandra chinensis *syn.*
Schubertia Grahami, see Araujia grandiflora *syn.*
Schubertia grandiflora, see Araujia grandiflora *syn.*

Scyphanthus elegans, see Grammatocarpus volubilis *syn.*
Senna, see Cassia corymbosa.
Silk Vine, see Periploca græca.
Silver Berry, see Elæagnus argentea.
Silver Tree, see Elæagnus argentea.
Siphisia tomentosa, see Aristolochia tomentosa *syn.*
Slippery Elm, see Fremontia californica.
Smilax quadrangularis, see S. rotundifolia *syn.*
Smilax tamnoides, see S. Bonanox *syn.*
Snake Gourd, see Trichosanthes anguina.
Snowball Tree, see Viburnum.
Snow Bush, Victorian, see Olearia stellulata.
Southern Fox Grape, see Vitis vulpina.
Spindle Tree, see Celastrus.
„ „ see Euonymus americanus.
Spinovitis Davidii, see Vitis vinifera, var. Davidii *syn.*
Spiræa grandiflora, see Exochorda grandiflora *syn.*
Staff Tree, see Celastrus.
Starwort, Australian, see Olearia dentata.
Stauntonia latifolia, see Holbælia latifolia *syn.*
Stereoxylon, see Escallonia *syn.*
Strawberry Bush, see Euonymus americanus.
Strawberry Tree, Kousa, see Cornus Kousa.
Stuartia grandiflora, see S. pseudocamellia *syn.*
Stuartia malacodendron, see S. virginica *syn.*
Stuartia Marylandica, see S. virginica *syn.*
Sumach, Poison, see Rhus toxicodendron.
Sumach, Swamp, see Rhus venenata.
Summer Grape, see Vitis æstivalis.
Supple Jack, see Berchemia volubilis.
Sweet Bay, see Magnolia glauca.
„ Briar, see R. rubiginosa.
Symphyoglossum acutum, see Cynanchum acutum *syn.*
Syringa, see Philadelphus.

Talauma obovata, see Magnolia obovata *syn.*
Talauma stellata, see Magnolia stellata *syn.*
Tecoma diversifolia, see Tecoma australis *syn.*
Teucrium latifolium, see T. fruticans *syn.*
Thermopsis laburnifolia, see Piptanthus nepalensis *syn.*
Thermopsis, see Piptanthus *syn.*
Thread Flower, Crimson, see Cæsalpinia Gilliesii.
Toxicodendron pinnata, see Rhus venenata *syn.*
Travellers' Joy, see Clematis vitalba.
Trefoil, Moon, see Medicago arborea.
Trichosanthes colubrina, see T. anguina *syn.*
Trochostigma, see Actinidia *syn.*
Tropæolum canariense, see T. aduncum *syn.*
Tropæolum peregrinum, see T. aduncum *syn.*
Trumpet Flower, see Bignonia.
„ „ see Tecoma radicans.
Turk's Cap Gourd, see Cucurbita maxima.
Turquoise Berried Vine, see Vitis heterophylla humulifolia.

Usteria scandens, see Maurandia scandens *syn.*
Uvaria triloba, see Asimina triloba *syn.*

Verbena, Lemon-scented, see Lippia citriodora.
Verbena triphylla, see Lippia citriodora *syn.*
Viburnum edule, see V. opulus *syn.*
Viburnum oxycoccos, see V. opulus *syn.*
Viburnum plicatum, see V. tomentosum *syn.*

Viceroy, see Cucurbita maxima.
Victorian Snow Bush, see Olearia stellulata.
Vigiera, see Escallonia *syn.*
Vine, see Vitis.
Vine Bower, see Clematis viticella.
Vine, Poison, see Rhus toxicodendron.
Viorna, see Clematis viorna.
Virginian Clematis, see Clematis virginiana.
Virginian Creeper, see Vitis inconstans.
Virginian, Wall, see Vitis Engelmanni.
Vitis Davidiana, see Vitis heterophylla humulifolia *syn.*
Vitis Davidi, see Vitis vinifera var. Davidii *syn.*
Vitis japonica, see V. inconstans *syn.*
Vitis muralis, see V. Engelmanni *syn.*
Vitis pseudospina, see V. Romaneti *syn.*
Vitis rotundifolia, see V. vulpina *syn*

Wall Virginian Creeper, see Vitis Engelmanni.
Wendlandia populifolia, see Cocculus carolinus *syn.*
West Indian Honeysuckle, see Tecoma capensis.
White Vine, see Clematis vitalba.
Wild Irishman, see Discaria toumatou.
Wineberry, see Rubus phænicolasius.
Wintera aromatica, see Drimys Winteri *syn.*
Winter Bark, see Drimys Winteri.
" Sweet, see Chimonanthus fragrans.
Wistaria grandiflora, see W. multijuga *syn.*
Wistaria, Tuberous-rooted, see Apios tuberosa.
Witch Hazel, see Hamamelis.
Wombat Berry, see Eustrephus latifolius.
Woodbine, see Lonicera periclymenum.
Woolly Vine, see Vitis lanata.

Yam, Chinese, see Discorea Batatas.
Yulan, see Magnolia conspicua.
Yulania conspicua, see Magnolia conspicua.
Yulania japonica, see Magnolia obovata *syn.*
Yunnan Mountain Ebony, see Bauhinia Yunnanensis.

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